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(THE)

MINING WORLD INDEX

of Current Literature

VOL. I FIRST HALF YEAR 1912

By CARPEL L. BREGER
Associate Editor
Mining and Engineering World

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AN INTERNATIONAL BIBLIOGRAPHY OF MINING AND THE MINING SCIENCES (MINING, ORE DRESSING, METALLURGY, ASSAYING, GEOLOGY, LAW, ETC.)

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PREFACE.

On January 7, 1911, there began in *Mining and Engineering World* (then *The Mining World*) a new and important departure in mining journalism, viz.: A classified index to the whole world's technical literature on the mining, metallurgical and affiliated mineral industries. Since that date the index has appeared each week, covering usually 18 to 24 columns of closely, yet neatly, printed matter.

The desirability of compiling the ever-accumulating weekly indices into semi-annual or annual volumes has long been apparent. After considerable study, the semi-annual edition was preferred to the annual. The present, or first, volume covers the current literature of the first semester of 1912. It is planned to publish these with the same promptness and dispatch that has characterized and will characterize the weekly indices; the semi-annual volumes will be issued within a few weeks of the end of the current half-year to which each volume will apply.

There is considerable additional value in the semi-annual volume in the way of revision. This revision includes among other things, the subdivision of the larger subject headings. Another valuable feature in the revision is in indicating where articles or books have been republished in whole or in abstract in other journals—indicating, in short, practically all the different, commoner technical journals in which an article has appeared. This feature will be particularly relished by those whose library facilities are rather limited, and this applies to nearly all mines and mining centers.

Of course, the work is not perfect. It is in fact open to a good deal of criticism. But considering the multitude and variety of the subjects treated, and the diversity of tastes and demands of the prospector, the practical miner, the mill man, the metallurgist, the layman, the operator, the student, the scientist, and the trained or expert engineer (to all of whom the work caters) we believe we have succeeded fairly well in hitting the happy combination of just the right mixture of efficient thoroughness, extreme simplicity, practical feasibility, and immediate and permanent value.

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EXPLANATIONS AND ABBREVIATIONS.

The entries show:

(1) The author of the article.

(2) A dash if the name is not apparent.

(3) The title, in italics, of the article or book. Titles in foreign languages are ordinarily followed by a translation or explanation in English.

(4) When the original title is insufficient a brief amplification is added. This addition is in brackets.

(5) The journal in which the article appeared; also the date of issue, and the page on which the article begins.

(6) Approximate number of words. Illustrated articles are indicated by an asterisk (*).

(7) The price. Articles mentioned will be supplied to subscribers of Mining and Engineering World and others at the prices quoted. Subscribers, however, will be allowed a discount of 5 cts. if the price of the article exceeds 50 cts.

Subjoined is a list of the commoner abbreviations found in this work. They are used chiefly in the names of periodicals, and of associations. The abbreviations will be found easily intelligible at sight, and are what they purport to be—self-explanatory abbreviations, not symbols.

Acad.—Academy; Académie; Accademia.
Afr.—Africa; African.
Akad.—Akademie.
Allgm.—Allgemeine.
Amer.—American.
Archts.—Architects.
Asso.—Association; Associazione.
Ber.—Berichte.
Bol.—Boletin; Boletim; Bollettino.
Bull.—Bulletin.
Bur.—Bureau.
Centralbl.—Centralblatt.
C-R.—Compte-Rendu; Resoconti.
Chem'l.—Chemical.
Chem'y.—Chemistry.
Coll'y.—Colliery.
Congr.—Congress.
d.—des (French and German).
Dept.—Department.
Deu.—Deutsche, etc.
Electr.—Electrical.
Engg.—Engineering.
Engr.—Engineer.
Engrs.—Engineers.
f.—for; für.
Gazt.—Gazette.
Geol.—Geological.
Geol'y.—Geology.
Ges.—Gesellschaft.
Gov't.—Government.
Hüttenm.—Hüttenmännische.
Ind'l.—Industrial; Industriel; Industrielle.
Ingr.—Ingenieure, Ingenieros.
Inst.—Institute; Institut; Instituto.
Instn.—Institution.
Jahresber.—Jahresbericht.
Jahrb.—Jahrbuch.
Jnl.—Journal.
Mag.—Magazine.
Mechl.—Mechanical.
Met'g'l.—Metallurgical.
Met'gy.—Metallurgy.
Mex.—Mexican.
Mittlngn.—Mitteilungen.
Mnfrrs.—Manufacturers.
Mng.—Mining.
Oestr.—Oesterreichische; Oesterreich.
Proc.—Proceedings.
Quar'ly.—Quarterly.
Rev.—Review; Revue; Revista.
Sci.—Science; Sciences.
Scient.—Scientific.
Soc.—Society; Société; Società.
Suppl.—Supplement; Supplementary.
Trans.—Transactions.
Ver.—Verein.
Verb.—Verband.
Verh.—Verhandlungen.
Zentralbl.—Zentralblatt.
Ztg.—Zeitung.
Zts.—Zeitschrift.

I. GEOGRAPHIC

COMPRISING REFERENCES TO MINING AND MINERAL DISTRICTS, ARRANGED ACCORDING TO COUNTRIES AND STATES.

CHAPTER I.—UNITED STATES.†

U. S. AT LARGE

Bastin, E. S.—*The Production of Graphite in* 1911; [Reviews graphite industry in U. S. (Ala., Alaska, Cal., Colo., Ga., Mass., Mich., Mont., Nev., N. Y., N. Car., Penn., Wis., Wyom.); also Ceylon, Chosen-Korea, and Cuba; extended bibliographies].—U. S. Geol. Surv., Mineral Resources f. 1911; 1912; 38 pp*; 20c.

Breen, L. A.—*Gold and Silver Production During* 1911.—Mng. Sci., Jan.25,1912, p. 63; 2800 w*; 25c.

Butler, B. S.—*Production of Copper in the U. S. in* 1911; [Advance statement of U. S. Geol. Survey].—Mining & Engg. World, May 11,1912; p. 1007; 1000 w; tables; 10c.

Butler, B. S—*The Production of Copper in* 1910: [Mine, smelter and refinery production and review: Alaska, Ariz., Cal., Colo., Ida., Mich., Mont., Nev., N. Mex., Tenn., Utah, N. Hamp., N. Car., Oreg., Penn., S. Dak., Wyo., Va., Wash.].—U. S. Geol. Survey, Mineral Resources f. 1910; 1911; 70 pp.; 10c.

Coons, A. T.—*The Production of Slate in* 1911; [In Cal., Ga., Me., Md., N. J., N. Y., Penn., Tenn., Vt., Va., Ark.].—U. S Geol. Surv., Mineral Resources f. 1911; 1912; pp. 19; 10c.

Day, David T.—*The Production of Petroleum in* 1910; [Cal., Colo., Ind., Ill., Kans., Ky., La., Mich., Mo., N. Y., Ohio, Okla., Penn., Texas, Utah, Wyo., W. Va.].—U. S. Geol. Survey, Mineral Resources f. 1910; 1911; 136 pp.; 10c.

Diller, J. S.—*The Production of Talc and Soapstone in* 1911; [N. Y., Vt., Va., Penn., Mass., N. Car., N. J., Cal., Ga., Md., R. I.].—U. S. Geol. Survey, Mineral Resources f. 1911; 9 pp.; 20c.

Diller, J. S.—*Production of Asbestos in* 1911; [Ariz.; Ga.; Vt.; Wyo.; also Cal.; Va.; Idaho].—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 9 pp; 10c.

Fränkel, H.—*Der Kupferbergbau in den Vereinigten Staaten;* [The copper-mining industry in the U. S.].—Tübingen, 1911; pp. —; (book).

Heikes, V. C., and others.—*Gold, Silver, Copper, Lead and Zinc in the Western States and Territories in* 1910; *Mine Produciton;* [Review of different camps and output; Alaska: A. H. Brooks, pp. 5-18; Arizona: V. C. Heikes, pp. 18-45; California: C. G. Yale, pp. 45-82; Colorado: C. W. Henderson, pp. 82-144; Idaho: C. N. Gerry, pp. 144-167; Montana, V. C. Heikes, pp. 167-196; Nevada: Heikes, pp. 196-232; New Mexico: Henderson, pp. 232-251; Oregon: Yale, pp. 251-263; S. Dakota: Henderson, pp. 263-269; Texas: Henderson, pp. 269-271; Utah: Heikes, pp. 271-295; Washington: Gerry, pp. 295-304; Wyoming: Henderson, pp. 304-308].—U. S. Geol. Survey, Minrl. Resources f. 1910; 1911; 308 pp.; 20c.

Hess, F. L.—*The Production of Tungsten in* 1910; [Production and resources in Ariz.; Cal.; Colo.; Conn.; Idaho; Me.; Mass.; Mo.; Mont.; Nev.; N. Mex.; N Car.; Oreg.; Penn.; S. Dak.; Tex.; Utah; Va.; Wash.; and Wyo.].—U. S. Geol. Survey, Mineral Resources f. 1910; 1911; 21 pp.; 10c.

Ingalls, W. R.—*Spelter Statistics for* 1911; [Ore and metal production in U. S.].—E. & M. J., May25,1912; p. 1039; 750 w; tables; 25c.

Janin, Chas.—*Reiew of Gold Dredging in* 1911; [Ariz.; Colo.; Idaho.; Mont.; Nev.; Oreg.; S. Dak.].—M. & S. P., Jan.13,1912, p. 101; 3000 w*; 20c.

McCaskey, H. D.—*The Production of Gold and Silver in* 1910 [in U. S., review by states; Ala., Alaska, Ariz., Cal., Colo., Ga., Ida., Ill., Ky., Mich., Mo., Mont., Nev., N. Hamp., Penn., N. Mex., N. Car., Oreg., Philippines, Porto Rico, S. Car., S. Dak., Tenn., Tex., Utah, Va., Wash., Wyo.].—U. S. Geol. Survey, Mineral Resources f. 1910; 1911; 39 pp.; 10c.

Middleton, J.—*The Production of Sand-lime Brick in the U. S. in* 1911.—U. S. Geol. Surv., Mineral Resources f. 1911; 1912; 5 pp; 20c.

Phalen, W. C.—*Sulphur, Pyrite and Sulphuric Acid in* 1911; [Production in U. S., with "Notes on the Manufacture of Sulphuric Acid From Smelter Fumes at Ducktown, Tenn.," by F. B. Laney; pp. 24-30].—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 30 pp.; 20c.

Phalen, W. C.—*Occurrence of Potash Salts in the Bitterns of the Eastern United States;* [N. Y., Mich., Ohio, W. Va., Kans., La.].—U. S. Geol. Survey Bull. 530-B; 19 pp.; 10c.

Abstract in Amer. Fertilizer, Dec.30, pp. 21-31; 25c.

Sterrett, D. B.—*The Production of Mica in* 1911; [N. Car., S. Dak., N. Hamp., N. Mex., Idaho, Va., Colo., S. Car., Ga., Ala., Tex., Wyom.].—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 9 pp.; 10c.

Tyssowski, J.—*Gold Dredge Installations During* 1911; [Alaska; Cal.; Idaho; Mont.; S. Dak.].—E. & M. J., March16,1912, p. 565; 1000 w; 25c.

Black Diamond Publ. Co.—*Yearbook,* 1912 *Edition;* [Directory of coal mines in U. S. and Canada; statistics, etc.].—Chicago, 1912; pp. —; $5 (book).

Manufacturers' Record. — *Anniversary Number;* [Reviews of iron and steel and mineral industries and resources of the Southern states].—Feb.22,1912; 65c.

K. P.—*Die Petroleumproduktion der Vereinigten Staaten im Jahre* 1911; [Preliminary oil production figures for the U. S.,

†Including Alaska.

1911].—Petroleum, Apr.17,1912; p. 779; 2000 w; 50c.

———. *Coal Industry in the United States during* 1911; [Review of production by states and prices].—Coal Trade Bull., Jan.2,1912; pp. 21-24, 56; 25c.

———. *Copper Production in* 1911; [In U. S. and world; figures of "Mineral Industry" and of Copper Producers' Asso.].—E. & M. J., May25,1912; p. 1044; 600 w; 25c.

———. *Review of Metal Production in the U. S.* [Gold and silver, by states, 1911].—M. & S. P., Jan.6,1912, p. 6; 1000 w; table; 35c.

ALABAMA

Evans.—*Lookout Mountain Coal.*—See Tennessee.

Lauck, W. J.—*Nationality of Miners of the Alabama Iron-Ore District.*—Mining & Engg. World, Feb.17,1912; p. 402; 500 w; 10c.

Lindsley, F. R.—*Continued Decline of Southern Pig-Iron Prices;* [Review for 1911].—Iron Trade Rev., Jan.4.1912; p. 81; 1200 w; table; 65c.

Munn, M. J.—*The Fayette Gas Field, Ala.*—U. S. Geol. Survey, Bull. 471-A; 1911; pp. 26-51*; 10c.

Abstract in Mining & Engg. World, June 22,1912; p. 1304; 1500 w; 10c.

Porter, J. J.—*The Future of the South in the Manufacture of Iron and Steel.*—Manfrrs. Record, Feb.22,1912; p. 53; 4000 w; 65c.

Skaggs, W. H.—*New Field Uncovered in Alabama District;* [Coalfields north of Tuscaloosa].—Black Diamond, Jan.13,1912; p. 15; 2000 w*; 30c.

Smith, C. H.—*The Clinton Type of Iron-Ore Deposits.*'—"Types of Ore Deposits," by H. F. Bain, and others; 1911; pp. 33-52.

Tupper, C. A.—*The Roden Co.'s Plant in Alabama;* [Roden Coal Co. mines, Cahaba field, Bibb county].—Coal Age, March30, 1912; p. 800; 4000 w*; 20c.

Tupper, C. A.—*Pumping Plant at Sloss Iron Mines, Alabama.*—E. & M. J., March 16,1912, p. 550; 1000 w*; 25c.

———. *Alabama Cons. Coal & Iron Co.; 2: Shelby Iron Co., Shelby, Ala.*—Manfrrs. Record, Feb.22,1912; p. 102-103; 4000 w*; 65c.

———. *Coal Industry of Alabama in* 1911.—Coal Age, Jan.6,1912, p. 405; 200 w; 20c.

———. *Coal Washing at Lahausage, Alabama.*—Mines & Minerals, Feb.,1912; p. 391; 750 w; 35c.

ALASKA

Baldwin, Geo. E.—*The Alaskan Question;* [What the government does for and to Alaska].—Amer. Mng. Congr., 1911; Proc., Vol. 14, pp. 299-308.

Abstract in Black Diamond, Oct.28,1911, p. 53; 3000 w; 30c.

Brewer, Wm. M.—*The Kenai Peninsula and Cook Inlet Free-Milling Gold Belt, Alaska.*—Brit. Columbia Mng., etc., Record, Oct.,1912, p. 78; 1200 w; 35c.

Brooks, Alfr.—*Mining in Alaska in* 1911; [U. S. Geol. Survey preliminary report on gold, copper, tin, etc., fields; and transportation].—Los Angeles Mng. Rev., Dec.30, 1911, p. 8; 2000 w; 20c. Also in E. & M. J., Jan.6,1912; p. 55; 6000 w*; 35c. Also in M. & S. P., Jan.6, p. 89; 700 w; 25c. Also in Mng. Sci., Jan.25, p. 96; 3200 w*; 25c. Also in Mining & Engg. World, Jan. 27; p. 197; 6000 w; 25c.

Brooks, Alfr. H.—*The Future of Alaska Coal.*—Amer. Mng. Congr., 1911; Proc., Vol. 14; pp. 291-298.

Eddy, L. H.—*Dredging for Placer Tin in Alaska;* [Buck Creek].—E. & M. J., Dec.23,1911, p. 1226; 1000 w*; 25c.

Elffner, A.—*How Can Alaska Be Developed?*—M. & S. P., March16,1912, p. 412; 1100 w; 20c.

Fisher, Hon. Walter L.—*Address on Alaska Problems before American Mining Congress, Oct.* 27, 1911.—Washington, 1911; 26 pp.; (pamphlet).

Reprint in Coal Trade Bull., Nov.1, p. 31; 9500 w; 25c. Abstract and discussion in E. & M. J., Nov.11, p. 925; 934; 5600 w; 25c. Also in Black Diamond, Nov.4, p. 18; 4000 w; 30c. Also in M. & S. P., Nov.25, p. 674; p. 672; 3500 w; 20c. Amer. Mng. Congr., Proc., Vol.14,1911; pp. 363-389.

French, H.—*How the Deposed Ex-Forester Would Mine Alaskan Coal;* [Criticizes Pinchot's suggestions for Alaska coal-land disposition].—Mining & Engg. World, Jan. 20,1912; p. 125; 1200 w; 10c.

Garrison, F. L.—*Proposed Revision of Alaskan Mining Laws.*—M. & S. P., Jan.6, 1912, p. 31; 3200 w; 35c.

Gibson, T. M.—*Tin Dredging in Alaska.*—M. & S. P., Jan.6,1912, p. 14; 500 w*; 35c.

Gibson, T. M.—*Gold-Dredging Industry on Seward Peninsula;* [Review for 1911].—M. & S. P., Jan.6,1912, p. 45; 4500 w*; 35c.

Griffith, Wm.—*The High-Grade Coals of Alaska.*—Amer. Mng. Congr., Proc., Vol. 14, 1911, p. 329-333.

Harriman, H. R.—*Wanted, An Informed Public Sentiment to Support a New Federal Policy Toward Alaska.*—Amer. Mng. Congr., Proc., Vol. 14; 1911; pp. 309-319.

Hershey, O. H.—*Geology at the Treadwell Mines, Alaska.*—"Types of Ore Deposits," by H. F. Bain and others; 1911; pp. 157-171. Reprinted from Mng. & Sc. Press, Feb.25 and March4,1911.

Janin, Chas.—*Gold Dredging in Alaska and the Yukon.*—Mng. Mag., Jan.,1912, p. 45; 2000 w*; 45c.

Johnson, W. W.—*Tin Dredging in the Seward Peninsula, Alaska.*—Mex. Mng. Jnl., May,1912; p. 18; 750 w*; 25c.

Joslin, F.—*The Alaskan Coal Situation.*—Amer. Mng. Congr., Proc., Vol.14,1911; pp. 351-362.

Knopf, Ad.—*The Sitka Mining District, Alaska.*—U. S. Geol. Survey, Bull. 504; 32 pp*; 10c. Abstract in Mining & Engg. World, Feb.24,1912; p. 457; March 2, p. 517; 8000 w*; 20c. Also in M. & S. P., March2, p. 332; 4500 w*; 15c. Also in Mng. Sci., March7, p. 231; 2200 w*; 20c. Also in Mines & Methods, March, p. 439; 1800 w*; 20c.

Lass, W. P.—*The Cyanide Plant at the Treadwell Mines, Alaska;* [Cyaniding concentrates].—Amer. Inst. Mng. Engrs., Trans. for Oct.,1911; 34 pp*; $1.15.

Abstract in M. & S. P., Oct.21,1911; p. 514; 6300 w*; 20c. Also in Mng. Sci., Apr. 18,1912; p. 346; Apr. 25, p. 369; 5000 w*; 30c.

Leehey, M. D.—*Coal and Transportation in Alaska;* [Also discusses and opposes leasing system].—Amer. Mng. Congr., Proc., Vol. 14, 1911; pp. 337-350.

Lewington, G. A. R.—*Alaska and the Yukon;* [Prospecting conditions and regulations, etc.].—M. & S. P., March30,1912; p. 473; 1800 w*; 20c.

Redepenning, —. *Beiträge zur Kenntnis einiger wichtiger Goldvorkommen in Amer-*

ika; [Some of the more important gold deposits of America; Nome beach deposits; Fairbanks placers; Apollo lode, Unga Id.; Douglas Id., Alaska; and French Guiana].—Zts. f. Berg-, H-, & Salinenw., Vol. 59, No. 5, 1911; pp. 695-707; $1.15.

Martin, G. C. and F. J. Katz.—*Geology and Coal Fields of the Lower Matanuska Valley, Alaska.*—U. S. Geol. Survey, Bull. 500; 1912; 98 pp.*; 10c. Abstract in M. & S. P., Apr.6,1912; p. 499; 2000 w; 20c.

Martin, G. C. and F. J. Katz.—*A Geologic Reconnaissance of the Iliamna Region, Alaska.*—U. S. Geol. Surv., Bull. 485; 1912; 138 pp*; 10c.

Abstract on petroleum resources in Mng. Sci., Apr.11,1912; p. 332; 1500 w*; 20c.

McKibben, F. P.—*Alaska; A Much Misunderstood Territory;* [Favors leasing mineral lands].—Engg. Mag., May,1912; p. 235-243; 1800 w*; 35c.

Setchell, W. A.; G. B. Rigg; F. M. McFarland; J. W. Turrentine and others.—*The Kelps of the Coast of the United States;* [and technology of sea-weed industry, especially for potash; bibliographies].—U. S., 62d Congr., 2d Session; Senate Doc. No. 190; 1912; pp. 130-290*.

Stewart, D. M.—*The Transportation Problem in Alaska.*—Amer. Inst. Mng. Engrs., Proc., Vol. 14, 1911; pp. 320-328. Abstract in M. & S. P., Nov. 11, p. 620; 2300 w; 20c. Also in Mining & Engg. World, Dec.30,1911, p. 1325; 2200 w; 10c.

Storm, L. W.—*The Valdez Gold Mining District, Alaska.*—Mining & Engg. World, March23,1912; p. 653; 3600 w*; 10c.

Thompson, Jul.—*How Can Alaska Be Developed?* [Opposes leasing system].—M. & S. P., Feb.17,1912; p. 282; 1800 w; 20c.

———. *Alaska Copper Mines;* [Discusses history and profitability].—M. & S. P., March16,1912, p. 396; 800 w; 20c.

———. *Development of Alaskan Coal Fields;* [Favors commission form of administration].—Engg. Record, March16,1912; p. 282; 1000 w; 20c.

———. *Gold Ores of Valdez, Alaska.*—Brit. Columbia Mng., etc., Record, Oct., 1911, p. 83; 900 w; 25c.

———. *Government-Owned Coal Mines in Alaska;* [Opposes proposition].—Mining & Engg. World, Jan.20,1912; p. 103; 2000 w; 10c.

———. *Oil and Gas;* [In Alberta, British Columbia, and Katalia, Alaska].—B. C. Mng. & Eng. Record, Oct.,1911, p. 91; 2800 w*; 35c.

———. *Tin in Alaska.*—Brit. Columbia Mng. & Engg. Record, Jan.,1912; p. 178; 500 w; 35c.

ARIZONA

Bond, J.—*Sale of the R. R. R. Mine near Patagonia, Ariz.*—E. & M. J., Apr.27,1912; p. 830; 500 w; 25c.

Butler, B. S.—*The Production of Copper in* 1910; [Review of mine, smelter and refinery output in U. S.].—U. S. Geol. Survey, Minrl. Resources of U. S. for 1910; 1911; 70 pp.; 10c.

Carson, E. W.—*Crown City Gold Mines;* [Gold Road district].—Los Angeles Mng. Rev., Feb.3,1912; p. 11; 600 w; 20c.

Coghill, W. H.—*Refractory Manganese-Silver Ores;* [Cyaniding tests on Arizona, Durango and Jalisco ores].—M. & S. P., June1,1912; p. 754; June8, p. 794; 9000 w; 30c.

Cole, D.—*The Ray Consol. Copper Co.; System of Mining.*—Colo. School of Mines Mag., Feb.,1912; p. 98; 2700 w; 35c.

Defty, W. E.—*The Vulture Mine.*—E. & M. J., May25,1912; p. 1044; 1000 w*; 25c.

Dinsmore, C. A.—*The Congress Junction Mining District.*—Mining & Engg. World, May11,1912; p. 1006; 1000 w*; 10c.

Dinsmore, C. A.—*United Gold Mines Co.;* [at Congress, Ariz.].—El Paso Mng. Jnl., Feb.,1912; p. 8;1000 w; 35c.

Dinsmore, C. A.—*Mining Country Tributary to Duncan, Ariz.*—Los Angeles Mng. Rev., March9,1912, p. 8; 1600 w; 20c. Also in Mining & Engg. World, March30, p. 714; 1500 w; 10c.

Dinsmore, C. A.—*The New Calumet & Arizona Smelter.*—El Paso Mng. Jnl., Feb., 1912; p. 18; 1400 w; 35c.

Dinsmore, Chas. A.—*Arizona Copper Co.'s New Smeltery.*—El Paso Mng. Jnl., Jan., 1911 [1912]; p. 17; 1300 w; 35c.

Dinsmore, Chas. A.—*The History and Development of the Gold Road Mine;* [Kingman, Arizona].—Mining & Engg. World, Dec.23,1911, p. 1275; 1700 w*; 10c. El Paso Mng. Jnl:, Dec.1911, p. 10; 1400 w; 35c.

Dinsmore, C.—*The Southwestern Oil Situation;* [7-Lakes district, N. Mex. and various Arizona districts].—El Paso Mng. Jnl., March,1912; p. 8; 500 w; 35c.

Douglas, Jas.—*The Copper Queen;* [Notes on Douglas' lecture before British Instn. of Mng. & Met'l'gy].—Mng. Mag., Dec.,1911, p. 415; 1000 w; 35c.

Douglas, Jas.—*Copper in Arizona in* 1911.—E. & M. J., Jan.6,1912, p. 12; 1000 w; 25c.

Golding, C. E.—*Miami Concentrating Mill.*—Mines & Minerals, Apr.,1912; p. 545; 2200 w*; 35c.

Gottsberger, B. B.—*Operations of the Miami Copper Co. in* 1911; [From annual report of general manager].—Mining & Engg. World, May11,1912; p. 1001; 1000 w; 10c. Also in M. & S. P., May25, p. 718; 1000 w*; 20c.

Humphreys, L. — *The Commonwealth Mine;* [Silver; Turquoise district].—M. & S. P., June8,1912; p. 798; 1200 w; 20c.

Ingalls, W. R.—*The Miami District, Ariz.;* [Review of mines, milling methods and ore bodies].—E. & M. J., Jan.13.1912, p. 119; 3000 w*; 25c. Also in Mines & Methods, Jan.,1912, p. 385; 3000 w*; 20c.

Jackling, D. C.—*Ray Cons. Copper Co.; Results of Year's Work,* 1911; [From 1st annual report].—Mining & Engg. World, May4,1912; p. 958; 800 w; 10c. Also discussed in M. & S. P., May18, p. 692; 3000 w*; 20c.

Lauck, W. J.—*Labor Conditions in Arizona Smelters.*—M. & S. P., Feb.3,1912; p. 212; 750 w; 20c.

Perkins, E. S.—*Review of Mining in the U. S. in* 1911; *Arizona* [Copper, gold, zinc, lead, silver].—Mining & Engg. World, Jan. 27,1912; p. 200; 4000 w; 25c.

Pickard, B. O.—*The Apache Mines of the Owl Head District, Arizona;* [Chiefly silver].—Mng. Sci., May30,1912; p. 473; 3000 w; 20c.

Probert, F. H. and R. B. Earling.—*The Estimation of Ore Reserves;* [Practice at Ray Central].—E. & M. J., Dec.16,1911; p. 1179; 1800 w*; 25c. Abstract in Mines & Methods, Jan.,1912; p. 389; 1800 w*; 25c.

Ransome, F. L.—*The Turquoise Copper-Mining District, Arizona.*—U. S. Geol. Surv., Bull. 530-C; 1912; 12 pp*; 10c.

Abstract in Mining & Engg. World, June 29; p. 1359; 2400 w; 10c.

Reagan, A. B.—*Mineral Resources of Fort Apache Region, Arizona;* [Silver, copper, gold, coal, oil, salt, hot mineral springs, gypsum, lime].—Mining & Engg. World, Dec.23,1911, p. 1274; 1500 w; 10c.

Root, W. A.—*The Dry Placers of Yuma County, Arizona.*—Mining & Engg. World, April6,1912; p. 758; 1200 w; 10c.
Reprinted in Los Angeles Mng. Rev., Apr.27, p. 5; 25c.

Sizer, F. L.—*The Mascot Copper Co. Ore Bodies;* [Dos Cabezos, Cochise county]—M. & S. P., Apr.13,1912; p. 537; 1000 w*; 20c.

Stewart, C. A.—*Geology and Ore Deposits of the Silverbell Mining District, Ariz.*—Amer. Inst. Mng. Engrs., Trans.; Feb., 1912; 51 pp*; $1.15. Abstract in Mining & Engg. World, May25, p. 1104; June1, p. 1147; 7000 w*; 20c.

Stewart, S. O.—*The Old Hat Mining District, Pinal County.*—Mining & Engg. World, May4,1912; p. 952; 500 w; 10c.

Tolman, C. F., Jr.—*Arizona;* [Brief copper review; 1911].—M. & S. P., Jan.6,1912, p. 82; 1500 w; 35c.

Tolman, C. F., Jr.—*Arizona in* 1911; [Brief review of gold, silver, lead, zinc, oil, Copper and stone.]—E. & M. J., Jan.6,1912, p. 66; 1000 w; 25c.

Tovote, W. L.—*Types of Porphyry Copper Deposits;* [Discusses geology and genesis of types of low-grade copper deposits in Utah, Arizona, Braden (Chile) and Nacozari (Sonora)].—M. & S. P., May18,1912; p. 686; 3000 w*; 20c.

Tovote, W. L.—*Magmatic Origin of Ore-Forming Solutions;* [In Arizona copper district especially; discusses Tolman's paper].—M. & S. P., Apr.27,1912; p. 601; 1500 w; 20c.

Waters, A. L.—*The Pioneer Smeltery, Arizona;* [Copper; near Tucson].—E. & M. J., May4,1912; p. 877; 1500 w*; 25c.

Weed, W. H.—*Notes on the Miami Copper District, Arizona;* [Ore deposits and geology].—Mining & Engg. World, May18, 1912; p. 1043; 2200 w; 10c.

———. *Calumet & Arizona Smeltery;* [Outlines proposed plans].—E. & M. J., Apr., 1912; p. 682; 1000 w; 25c.

———. *Costs of Ore Extraction at Detroit Copper Co., Arizona.*—E. & M. J., Apr.13,1912; p. 741; 300 w; 25c.

———. *Historical Notes on Yavapai County, Arizona.*—Mng. Sci., March7,1912, p. 229; 1000 w*; 20c.

———. *Old Dominion Mining & Smelting Co. Report.*—Mining & Engg. World, Apr.13,1912; p. 823; 1800 w; 10c.

———. *Porphyry Coppers and Ore Reserves;* [Compares Utah, Ray, Chino, and Nevada].—M. & S. P., May11,1912; p. 653; 1200 w; 20c.

———. *San Domingo Placers;* [60 miles from Phoenix].—El Paso Mng. Jnl., March, 1912; p. 13; 1000 w; 35c.

ARKANSAS

See also under Missouri for "Joplin District."

Buckley, E. R.—*Lead and Zinc Deposits of Ozark Region.*—See under Missouri.

Butler and Dunlop.—*Metal Production in the Central States,* 1911.—See under Michigan.

Fuller, J. T.—*The Arkansas Diamond Field.*—E. & M. J., Jan.6,1912, p. 6; 300 w; 25c.

Phalen, W. C.—*Bauxite and Aluminum;* [Production in U. S., 1911].—U. S. Geol. Surv., Mineral Resources f. 1911; 1912; 19 pp.; 20c. Abstract in Mining & Engg. World, May11, 1912; p. 997; 3000 w; 20c.

Purdue, A. H. and J. E. Finney—*The Operation of the Mine-Run Law in Arkansas;* [Paying miners for slack and "mine run" coal].—Amer. Mng. Congr., 1911; Proc., Vol. XIV, pp. 227-240.

Waggaman, W. H.—*A Report on the Natural Phosphates of Tennessee, Kentucky and Arkansas.*—U. S., 62d Congr., 2d Session; Senate Document No. 190; pp. 49-77*. Reprinted as Bull. 81 of U. S. Bureau of Soils, March20,1912; 36 pp*.

CALIFORNIA

(a) Oil and Gas

Anderson, R.—*Notes on the Geology and Possible Oil Resources of the South End of the San Joaquin Valley, California.*—U. S. Geol. Survey, Bull. 471-A; 1911; pp. 102-132*; 10c.

Anderson, F. M.—*The Neocene Deposits of Kern River, California, and the Temblor Basin.*—Cal. Acad. of Sci., Proc., Vol. (4) III, Nov.,1911; 75 pp*.

Baker, Chas. L.—*Notes on the Later Cenozoic History of the Mohave Desert Region in Southeastern California.*—Univ. of Cal., Dept. of Geol., Bull., Vol. VI, No. 15, Dec.2,1911; 50 pp*.

Ballagh, C.—*Some Phases of Oil-Well Drilling in the Midway Field.*—Colo. School of Mines Mag., May,1912; p. 178; 3000 w; 50c.

Bowie, C. P.—*Pumping California Petroleum;* [Describes pipe-line systems].—Oil Age, Sept.8,1911, p. 6; 1800 w*; 20c. Also in M. & S. P., Sept.2, p. 293; 1800 w*; 20c.
German abstract in Allg. Oesterr. Chemiker Ztg., Dec.15, p. 185; 1800 w*; 45c.

Brown, G. C.—*California Oil Resources.*—Salt Lake Mng. Rev., Jan.30,1912; p. 19; 800 w*; 25c.

Cooney, M. J.—*Mono Oil Fields;* [From Bridgeport, Cal., "Chronicle-Union"].—Los Angeles Mng. Rev., Feb.3, p. 5; 1500 w; 20c.

Day, David T.—*The Production of Petroleum in* 1910.—U. S. Geol. Survey, Mineral Resources f. 1910; 1911; 136 pp; 10c.

Dumble, E. T.—*Notes on Tertiary Deposits near Coalinga Oil Field, and Their Stratigraphic Relations With the Upper Cretaceous.*—Jnl. of Geol'y, Jan.-Feb.,1912; pp. 28-37; 80c.

Gassaway, S. G.—*Electric Motors for Oil-Well Service;* [Pumping in California oil fields].—Jnl. of El'y, Power & Gas, Jan.13, 1912; p. 25; 1500 w*; 35c.

Grow, C. M.—*Southern California;* [Project to pipe natural gas from Midway oil field to San Bernardino district].—Nat. Gas Jnl., June,1912; p. 261; 600 w; 35c.

Hager, D.—*Method Employed in Operating Pumping Oil Wells* [in California].—Mining & Engg. World, Apr.13,1912; p. 817; 2200 w*; 10c.
Reprinted in Oil Age, May3, pp. 2, 6, 10; 20c.

Menzin, A. L.—*Drilling Boilers in the California Oil Fields.*—Jnl. of El'y, Power & Gas, Jan.20,1912; p. 51; 1000 w*; 35c.

Maujer, A. R.—*The Pacific Gas & Electric Co.*—Power, May21,1912; p. 720; 2700 w*; 15c.

Requa, M. L.—*Die Petroleumindustrie Kaliforniens* 1911; [Review of the petroleum industry of California, 1911; from

the Petroleum Review].—Allgm. Oestr. Chemiker Ztg., May15,1912; p. 73; 1600 w; 35c.

Requa, M. L.—*Present Conditions in the California Oil Fields.*—Amer. Inst. Mng. Engrs., Bull. 64, Apr.,1912; pp. 377-386; $1.15.

Requa, M. L.—*Petroleum in California in* 1911.—E. & M. J., Jan.6,1912, p. 93; 2500 w; 25c.

Wolf, J. H. G.—*Production and Prices in the California Oilfields;* [Review for 1911].—M. & S. P., Jan.6,1912, p. 22; 2100 w*; 35c.

———. *California in* 1911; [Gold, silver, oil, copper, lead, iron, etc.].—Mng. Jnl., Jan. 6,1912, p. 13; 2500 w; 35c.

———. *California;* 1911 *Statistics Complete.*—Oil & Gas Jnl., Feb.1,1912; p. 12; 2000 w; tables; 20c.

———. *California Oil Situation; Brief Resume of the Past and Present, with a Look into the Future.*—Oil Age, Apr.12, 1912; p. 1; 2100 w; 20c.

———. *California Oil Exports in* 1911.—Oil Age, Feb.23,1912; p. 1; 750 w; 20c.

———. *Casing Used in California Fields;* [From "Oil City Derrick"].—Well Drillers' News, May,1912; p. 11; 600 w; 10c.

———. *Duration of California Petroleum Resources.*—Oil Age, Jan.12,1912; p. 1; 1000 w; 20c.

———. *Growth of Asphalt Industry in California.*—Oil Age, Dec.15,1911, p. 1; 800 w; 20c.

———. *November Figures* [Oil Production and Wells in California].—Oil Age, Dec.29,1911, p. 1; 1000 w; table; 20c.

———. *Production and Consumption for* 1911; [California Oil].—Oil Age, Feb.2, 1912; p. 1; Feb. 9, p. 1; 1500 w; tables; 30c.

———. *January Production,* 1912; *California Oil Fields.*—Oil Age, March1,1912; p. 1; 750 w; table; 20c.

———. *February Consumption;* [Statistics of California oil production and consumption].—Oil Age, March29,1912; p. 1; 1000 w; 20c.

———. *March Consumption;* [Statistics of oil production, March,1912].—Oil Age, Apr.26,1912; p. 1; 750 w; table; 20c.

———. *Water in California Oil Fields.*—E. & M. J., March30,1912; p. 644; 500 w; 25c.

(b) Gold Dredging

Cranston, R. E.—*The Design and Mechanical Features of the California Gold Dredge.*—Amer. Soc. Mechl. Engrs., Jnl.; Feb.,1912; pp. 169-225*; 95c.

Extracts in E. & M. J., Feb.17, p. 359; Feb.24, p. 417; March2, p. 455; March 9, p. 507; 14,000 w*; 75c. Also in M. & S. P., Feb.24, p. 303; March2, p. 338; March9, p. 372; 14,000 w*; 40c.

Eddy, L. H.—*Dredges on Upper American River, California.*—E. & M. J., May18, 1912; p. 997; 3600 w*; 25c.

Eddy, L. H.—*A New Gold Dredge at Oroville, Cal.;* [Oro Vista No. 1].—E. & M. J., Feb.10,1912; p. 306; 1200 w; 25c.

Eddy, L. H.—*Reconstructed Gold Dredges in California.*—E. & M. J., May25,1912; p. 1048; 1000 w; 25c.

Eddy, L. H.—*Northern California Gold Dredging.*—E. & M. J., March23,1912; p. 607; 4500 w*; 25c.

Ettrup, L. and H. Homberger.—*Goldgewinnung durch Bagger in Kalifornien;* [Review of gold-dredging industry of California].—Ver. Deu. Ingr., Zts., Oct.14,1911, p. 1717; 5000 w*; 50c.

Haley, C. S.—*Elevating 10-ct. Gravel at a Profit;* [Elevator system of hydraulic gold mining in California and Oregon].—M. & S. P., Apr.13,1912; p. 530; 3600 w*; 20c.

Hazard, F. H.—*A New Design for Undercurrent Grizzly;* [In northern California hydraulic mines].—E. & M. J., Jan.27,1912, p. 207; 1500 w*; 25c.

Janin, Chas. J.—*Gold Dredging in California.*—M. & S. P., Jan.6,1912, p. 72; 4000 w*; 35c.

Janin, Chas.—*Present-Day Problems in California Gold-Dredging.* — Amer. Inst. Mng. Engrs., Bull. 63, March,1912; pp. 241-260*; $1.15. Abstract in Engg. & Contractg., Apr.10, p. 408; 2000 w; 20c.

Martin, A. H.—*Gold Dredging in the Folsom Field of California.*—Mining & Engg. World, May25,1912; p. 1091; 2100 w*; 10c.

Martin, Al. H.—*Steel for California Dredges.*—Mng. Jnl., May4,1912; p. 451; 1500 w; 35c.

Martin, Al. H.—*Dredging Previously Worked Deposits;* [Oroville].—Mining & Engg. World, Dec.9,1911, p. 1174; 1200 w; 10c. Reprinted in Los Angeles Mng. Rev., Jan.6,1912, p. 10; 1200 w*; 20c.

Martin, Al. H.—*Evolution of the California Dredge.*—Mines & Methods, Jan., 1912; p. 379; 1800 w*; 35c.

Martin, Al. H.—*The First Steel Dredge in California.*—Mng. Sci., Feb.8,1912; p. 146; 1400 w; 20c.

Martin, A. H.—*Innovations in California Dredging Fields in 1911.*—Mining & Engg. World, Feb.24,1912; p. 446; 1500 w; 10c.

Martin, Al. H.—*Electrical Equipment of California Dredges.*—Mining & Engg. World, Dec.16,1911, p. 1227; 1500 w; 10c.

Martin, Al. H.—*Converting Tailings to Commercial Products;* [Natomas dredge debris used for building stone].—Mines & Methods, May,1912; p. 478; 3000 w*; 20c.

Martin, Al. H.—*Reducing California Dredging Costs;* [Economies in large-size buckets].—Mines & Minerals, June,1912; p. 678; 1500 w; 35c.

———. *A California Steel Dredge;* [at Folsom].—Iron Age, May2,1912; p. 1092; 750 w; 30c.

(c) Gold Mining, Copper and Miscellaneous

Butler, B. S.—*The Production of Copper in* 1910; [Review of mine, smelter and refinery output in U. S.].—U. S. Geol. Survey, Minrl. Resources of U. S. for 1910; 1911; 70 pp.; 10c.

Darrow, W. E.—*Treatment of Matte from Mill Clean Up;* [at Amador City, Cal.].—M. & S. P., Apr.6,1912; p. 508; 500 w; 20c.

Davis, Chas. H.—*The Los Burros Mining District;* [Monterey county].—M. & S. P., May18,1912; p. 696; 2800 w*; 20c.

Del Mar, Alg.—*The High-Grade District, California.*—E. & M. J., Apr.20,1912; p. 799; 500 w*; 25c.

Dinsmore, Chas. A.—*The Needles Smelter;* [U. S. Smeltg., Refg. & Mng. Co., lead-copper plant at Needles, Cal.].—El Paso Mng. Jnl., Dec.,1911, p. 12; 1300 w*; 35c. Also in Mining & Engg. World, Dec.,30, p. 1324*; 1000 w*; 10c.

Eddy, L. H.—*Plymouth Consol. Mines, Cal.*—E. & M. J., Jan.20,1912, p. 181; 1800 w; 25c.

Eddy, L. H.—*Quicksilver in California in* 1911.—E. & M. J., Jan.6,1912, p. 38; 1000 w; 25c.

Eddy, L. H.—*Mining in California in* 1911; [Gold, tungsten, iron, antimony].—E. & M. J., Jan.6,1912, p. 61; 1500 w; 25c.

Eddy, L. H.—*Thiogen Process Demonstration;* [Treating McDougal-roaster gases for sulphur at Penn smelter, Campo Seco]. —E. & M. J., May4,1912; p. 873; 1500 w*; 25c.

Abstract in Italian in Rassegna Mineraria, May21, p. 286; 500 w; 45c.

Hamman, W. D.—*Potash Solutions in the Searles Lake Region.*—Mng. Sci., Apr. 25,1912; p. 372; May 2, p. 391; 4500 w; 30c.

Hamman, W. D.—*The Searles Lake Potash Deposit.*—E. & M. J., May18,1912; p. 975; 3000 w; 25c.

Howard, C. A.—*The Camp of High Grade.*—Los Angeles Mng. Rev., May4, 1912; p. 11; 1000 w; 20c.

Kennedy, J. D.—*Government Bureaus and Potash;* [Includes notes on California deposits of potash, nitre and salines].—M. & S. P., May11,1912; p. 669; 1800 w; 20c.

Kerr, M. B.—*Mines of the Southern Sierras of California and Nevada;* [Review of gold resources].—M. & S. P., Jan.6,1912, p. 34; 1800 w*; 35c.

Lauck, W. J. — *Immigrant Gold-Mine Workers in Amador County, Cal.*—M. & S. P., Feb.17,1912; p. 279; 1200 w; 20c.

Mace, C. H.—*Genesis of Leona Heights Ore Deposit, Cal.;* [Cupriferous pyrite near Oakland].—Mining & Engg. World, Dec.30, 1911, p. 1320; 1500 w; 10c.

Martin, A. H.—*The Headlight, a Notable California Gold Mine.*—Mining & Engg. World, Feb.3,1912; p. 286; 1200 w; 10c.

Martin, A. H.—*Review of Mining in the U. S. in* 1911; *California* [Gold, copper, iron, oil, lead, silver, stone].—Mining & Engg. World, Jan.27,1912; p. 203; 8000 w; 10c.

Martin, Al. H.—*Progress of Smelter Smoke Control in California;* [Baghouse system at Mammoth Copper Co. plant at Kennett].—Mng. Sci., Apr.4,1912; p. 306; 2400 w*; 20c. Also described by Martin in Mines & Methods, April; p. 437; 2100 w*; 20c.

Morse, J. G.—*Mining Operations in Sierra County, Cal.*—Mng. Sci., Feb.1,1912, p. 129; 1600 w*; 20c.

Schmatolla, E.—*Ein Magnesitvorkommen in Californien;* [Magnesites of the Sierra Nevadas].—Ton-Industrie Ztg., Feb.15, 1912; p. 255; 250 w; 25c.

Setchell, W. A.; G. B. Rigg; F. M. McFarland; J. W. Turrentine and others.—*The Kelps of the Coast of the United States;* [and technology of sea-weed industry, especially for potash; bibliographies].—U. S., 62d Congr., 2d Session; Senate Doc. No. 190; 1912; pp. 130-290*.

Spotswood, A.—*Occurrence and Uses of American Tourmalines;* [Describes chiefly Himalaya mines, San Diego county, Cal.]. —Mining & Engg. World, Dec.23,1911, p. 1280; 2000 w; 10c.

Stines, N. C.—*The Camp of High Grade in Northern California;* [Hoag district, Modoc county].—Mng. Sci., Jan.11,1912, p. 27; 2500 w; 20c.

Storms, Wm. H.—*California's Mineral Industry in* 1911.—Mining & Engg. World, Jan.13,1912; p. 68; 1400 w; 10c. Also in M. & S. P., Jan.6,1912; p. 12; 35c.

Storms, W. H.—*Quicksilver Production of California* [1911].—M. & S. P., March16, 1912, p. 400; 250 w; 20c.

Storms, Wm. H.—*The State Mining Bureau;* [Outline of scope of future work].— M. & S. P., Dec.9,1911, p. 747; 1500 w; 20c. Also discussed in Mining & Engg. World, Dec.16,1911, p. 1222; 1500 w; 10c.

Tupper, C. A.—*Copper Smelting at the Kennett Plant, Cal.*—Mining & Engg. World, Feb.10,1912; p. 337; 2000 w*; 10c.

Watkins, S. L.—*The New Gem Mineral El Doradoite.*—Los Angeles Mng. Rev., Jan.13,1912; p. 11; 400 w; 20c.

Yale, C. G.—*Gold Production in California;* [Statistical and general review].—Amer. Inst. Mng. Engrs., Bull. 63; March,1912; pp. 261-266; $1.15. Abstract in Mng. Sci., Apr.11, p. 329; 1600 w; 20c.

Abstract in Italian in Rassegna Mineraria, Junel, p. 312; 600 w; 45c.

———. *Aluminum Ore and Its Accessability in California;* [Discusses alleged "aluminum silicate ore" in southern California].—Los Angeles Mng. Rev., March30, 1912; p. 5; Apr.6, p. 5; Apr.13, p. —; 6000 w; 40c.

———. *Argonaut Amalgamation Tables;* [at Argonaut mill, Jackson].—E. & M. J., May18,1912; p. 983; 350 w*; 25c.

———. *Government Bureaus and Potash;* [Discusses Survey press bulletin announcing potash in Borax Lake district, Cal.].—M. & S. P., March30,1912; p. 460; Apr.20, p. 571; 3500 w; 30c.

———. *Potash Salines in "Borax Lake," Mohave Desert;* [Press bulletin of U. S. Geological Survey and U. S. Bur. of Soils]. —Mining & Engg. World. March30,1912; p. 713; 1200 w; 10c. Also in Mng. Sci., March 28, p. 293; 1000 w; 20c. Also in E. & M. J., March30, p. 643; 600 w; 25c. Also in Los Angeles Mng. Rev., Apr.6, p. 5; 1000 w; 20c. Also in Amer. Fertilizer, Apr.6, p. 35; 1200 w; 25c. Also in Canadian Engr., Apr.18, p. 543; 1200 w; 25c.

———. *Preparations for Reopening Plymouth Mines, Amador County.*—E. & M. J., Apr.6,1912; p. 682; 1200 w*; 25c.

———. *The High-Grade District, Cal.*— Salt Lake Mng. Rev., Apr.30,1912; p. 11; 5000 w*; 25c.

The High Grade district is also described in Mining & Engg. World May11, p. 999; 1200 w*; 10c. Also in Mng. Investor (reprint from High Grade "News"), May 13, pp. 209, 214; 2500 w; 25c. Also in E. & M. J., May18, p. 972; 750 w; 25c. Also in M. & S. P., May25, p. 715; 1100 w; 20c. Also in Mines & Minerals, June, p. 681; 500 w*; 35c.

———. *The Rand and California;* [Similarity of working conditions].—S. Afr. Mng. Jnl., Dec.30,1911, p. 597; 2000 w; 35c.

COLORADO

Ackermann, Eug.—*Le marché du wolfram;* [The wolfram market; conditions of competition between Colorado and the rest of the wold; from Jnl. d. Mines & Métallurgie].—Echo d. Mines, May13,1912; p. 588; 1800 w; 35c.

Argall, P. H.—*Colorado Metallurgical Progress;* [Review for 1911].—M. & S. P., Jan.6.1912, p. 78; 3200 w*; 35c.

Argall, P.—*Reducing Costs, Increasing Profits;* [Cyanidation of Cripple Creek, Colo., $3 sulpho-telluride ore].—Banker & Investor Mag., Oct.,1911, p. 368; 1800 w; 50c. Reprinted in Mining & Engg. World, Apr.27,1912; p. 915; 10c.

Babbitt, E. C.—*The Marion Zinc Mine of Custer County, Colo.*—Mng. Sci., Dec.21, 1911, p. 548; 1500 w*; 20c.

Butler, G. M.—*The Gold of Newlin's Gulch near Denver, Colo.*—Mng. Sci., June 6,1912; p. 486; 1300 w*; 20c.

Brown, T. A.—*The Placer Mines of Summit County, Colo., and Geological Structure Thereof.*—Mng. Sci., Feb.15,1912; p. 171; 1000 w*; 20c.

Brownlee, A. G.—*Importance of the Malm Process in the Metallurgy of Complex Ores;* [Dry chlorination of "low-grade" ores for recovery of all the metal values].—Amer. Mng. Congr., 1911; Proc., Vol. 14; pp. 168-179.

Carl, P. H.—*Vanadium as a Staple Colorado Product;* [Reviews production in 1911].—Mng. Sci., May9,1912; p. 409; 1500 w; 20c.

Carl, P. H.—*The Status of Mining in Colorado Districts;* [Reviews drainage problems, cyaniding and vanadium].—Mng. Sci., Jan.25,1912, p. 99; 1800 w*; 25c.

Clerc, F. L.—*The Utilization of the Zinc Carbonates and Silicates of Leadville, Colo.*].—Colo. Scient. Soc., Proc., Sept., 1911, pp. 85-98; 65c. Abstract in Mng. Sci., Feb.22, p. 187; 2200 w*; 20c.

Collins, G. E.—*Metal Mining in Colorado in* 1911; [Gold, silver, lead, zinc, copper, tungsten, uranium, vanadium].—E. & M. J., Jan.6,1912, p. 59; 3000 w; 25c.

Colorado Mng. & Met'g'l Asso.—*Proceedings of the First Mass Convention, Denver, Dec.* 28, 1911.—Colo. School of Mines, Quar'ly; Jan.,1912; pp. 3-29; 50c.

Countryman, T. R.—*Present Status of Drainage at Cripple Creek.*—Mng. Sci., Jan. 25,1912, p. 94; 1500 w*; 25c.

Curran, T. F. V.—*Vanadium; Its Ores and Uses.*—E. & M. J., June1,1912; p. 1093; 3500 w*; 25c.

Dalrymple, J.—*The Colorado Coal Industry in* 1911.—Coal Age, Jan.6,1912, p. 405; 500 w; 20c.

Dodge, W. R.—*Retreatment of Mill Tailings at Cripple Creek.*—Mng. Sci., Dec.14, 1911, p. 528; 2400 w*; 20c. Abstract in Mining & Engg. World, Feb.17,1912, p. 410; 1200 w*; 10c.

Downer, F. M.—*The Denver Mint and Its Operation;* [Read to Colo. Electric Club].—Mng. Sci., May16,1912; p. 426; 1400 w; 20c.

Downey, Chas. J.—*Cyaniding the Sulphide Ores of Idaho Springs;* [Hudson mill].—Mng. Sci., March21,1912; p. 258; 2000 w*; 20c.

Fischer, Siegfr—*The Concentration of Carnotite Ores, and Some Similar Ores.*—Met. & Cheml. Engg., June,1912; p. 366; 2700 w*; 35c.

Frenzel, A. B.—*Growth of the Rare Metal Industry;* [Colorado tungsten, vanadium, cadmium, bismuth, molybdenum and uranium].—Mng. Sci., Jan.25,1912, p. 73; 1800 w; 25c.

Frenzel, A. B.—*World-Wide Influence of a Denver Ore-Testing Plant;* [Describes H. E. Wood mill equipment in Denver].—Mng. Sci., Jan.25,1912, p. 107; 2000 w*; 25c.

Hall, F.—*Review of Mining in the U. S. in* 1911; *Colorado.*—Mining & Engg. World, Jan.27,1912; p. 208; 8000 w; 25c.

Headden, Wm. P.—*The Occurrence and Origin of Nitrates in Colorado Soils.*—Colo. Scient. Soc., Proc., Vol. X, Nov.,1911; pp. 99-122; 65c.

Henahen, T. R.—*Mineral Production of Colorado by Counties in* 1911; [Table; report of state commissioner of mines; gold, silver, lead, copper, zinc, tungsten, uranium, vanadium].—Mng. Sci., May9,1912; p. 409; table; 20c. Also in M. & S. P., May18, p. 699; table; 20c.

Hess, F. L.—*The Production of Vanadium in* 1910.—U. S. Geol. Survey Mineral Resources f. 1910; 1911; 2000 w; 10c.

Lakes, Arthur. — *Operations at the Wellington Mine, Breckenridge, Colo.*—Mining & Engg. World, Dec.23,1911, p. 1265; 2500 w*; 10c.

Lakes, A., Sr.—*Western Canada Coalfields and those of Colorado Compared.*—Brit. Columbia Mng. & Engg. Record, Feb., 1912; p. 208; 2400 w; 35c.

Lakes, A.—*Geology of the Breckenridge Placers.*—Mines & Minerals, Feb.,1912; p. 430; 4000 w*; 35c.

Lakes, A.—*The Canadian Oil Shales and Their Comparison with Some Elsewhere; Colorado*].—Canadian Mng. Jnl., May1, 1912; p. 314; 1000 w; 25c.

Lakes, A., Jr.—*Oil Signs and Prospects in Colorado and Alberta.*—Canadian Mng. Jnl., Apr.15,1912; p. 271; 1000 w; 25c.

Larsen, E. S.—*Alunite in the San Cristobal quadrangle, Colo.*—U. S. Geol. Survey, Bull. 530-F; 1912; 7 pp.*; 20c.

Linderfelt, T. C. and J. K. Stewart.—*Stratton's Independence Mill;* [Treatment of low-grade tailings at Cripple Creek, Colo.].—E. & M. J., Feb.10,1912; p. 311; 2700 w*; 25c.

MacGregor, F. S.—*Electrostatic Separation in the San Juan District;* [Huff process at Sunnyside mine near Silverton].—Mng. Sci., May23,1912; p. 448; 1000 w*; 20c.

McClave, J. M.—*Milling the Tam O'Shanter Ore;* [Argentiferous lead-zinc; Ashcroft, Colo.].—Mines & Minerals, March, 1912, p. 492; 1600 w*; 35c.

Parmelee, H. C.—*Cyaniding by Continuous Decantation in Clear Creek County, Colo.;* [Hudson Mill, Idaho Springs].—Met. & Cheml. Engg., Jan.,1912; p. 27; 3000 w*; 35c.

Pierce, R. A.—*The Lignite Fields of Colorado.*—Coal Age, Feb.3,1912; p. 534; 2500 w*; 20c.

Ralston, O. C.—*Costs of Milling in Leadville, Colo.*—Mines & Minerals, May,1912; p. 619; 750 w; 35c.

Ralston, O. C.—*Leadville, Colo., Fissure Veins.*—Mines & Minerals, Apr.,1912; p. 549; 1000 w; 35c.

Rickard, T. A.—*Two Famous Mines, II;* [History of Camp Bird mine, Ouray, Colo.].—Mng. & S. Press, Dec.30,1911, p. 827; 2000 w*; 20c.

Schneider, G. W.—*Cyanidation of Gold and Silver Ores;* [Developments on Colorado tailings and concentrates].—Colo. School of Mines Quar'ly, Jan.,1912; p. 13; 1800 w; 50c.

Shubart, B.—*A Mammoth Seam in Colorado;* [North Park field, Jackson county].—Coal Age, May4,1912; p. 966; 1000 w*; 20c.

Taylor, G. M.—*Construction Costs at the New Portland Mill, Cripple Creek, Colo.*—M. & S. P., Jan.6,1912, p. 12; chart; 35c.

Thomas, K.—*Vanadium in Southwestern Colorado.*—M. & S. P., Jan.27,1912; p. 168; 750 w; 20c.

Traphagen, F. W.—*The Low-Grade Ore Problem in Colorado;* [From Colo. School of Mines Quar'ly, Jan.,1912].—Mining & Engg. World, March30,1912; p. 722; 1400 w; 10c.

Spanish abstract in Mex. Mng. Jnl., June 1912; p. 55; 1500 w; 25c.

Warwick, A. W.—*The Colburn Mill and the Clancy Process;* [Abstract from Mng. Sci., Nov.9,1911].—Mining & Engg. World, Jan.13,1912; p. 74; 1200 w; 10c.

Weeks, F. D. & E. H. Laws.—*Sinter-Roasting with Dwight-Lloyd Machines at Salida, Colo.*—Met. & Cheml. Engg., Feb., 1912; p. 87; 2000 w*; 35c.

Weston, W.—*The White Marble Quarries of Colorado.*—Mining & Engg. World, Apr. 6,1912; p. 761; 750 w; 10c.

Weston, W.—*Cripple Creek Drainage.*—E. & M. J., Feb.10,1912; p. 325; 1200 w; 25c.

Weston, W.—*Conditions in the Yampa Coalfield of Colorado.*—Mining & Engg. World, Dec.16,1911, p. 1225; 1200 w*; 10c.

Whiteside, F. W.—*The Trinidad District in Colorado.*—Coal Age, Feb.24,1912; p. 632; March2, p. 664; 5500 w*; 30c.

Willmarth, O. B.—*Radioactivity of Colorado Carnotite;* [With radiographs].—Mng. Sci., Apr.4,1912; p. 313; 500 w*; 20c.

Wood, J. R.—*The Black Metal in Boulder County, Colo.*—Mng. Sci., Apr.11,1912; p. 335; 750 w; 20c.

Wood, J. R.—*New Vanadium Fields.*—Mng. Sci., Jan.25,1912, p. 74; 700 w*; 25c.

Worcester, S. A.—*A Cripple Creek Ore and Waste Plant.*—E. & M. J., June15,1912; p. 1173; 1500 w.*; 25c.

Worcester, S. A.—*Colburn-Ajax Mill, Victor, Colo;* [Using Moore-Clancy process].—E. & M. J., Apr.13,1912; p. 753; 2700 w*; 25c.

———. *Coalmont Fuel;* [Discusses first shipments from this Colorado field to Laramie, Wyo.].—The New Empire, Jan.,1912; p. 9; 500 w; 20c.

———. *Cyaniding in Colorado;* [Brief review of progress].—Mng. Sci., Jan.11,1912, p. 21; 750 w; 20c.

———. *Development of the Rico-Wellington Mine.*—Salt Lake Mng. Rev., March 15,1912; p. 11; 1400 w*; 25c.

———. *Gold Hill Bonanza Revived;* [Boulder county, Colo.].—Mng. Sci., Apr.18, 1912; p. 351; 650 w; 20c.

———. *Paradox Valley Carnotite Deposits.*—Salt Lake Mng. Rev., Jan.15,1912, p. 14; 2000 w*; 25c.

———. *Portland Mines and Mills.*—Mines & Minerals, Apr.,1912; p. 562; 1000 w*; 35c.

———. *Remodeling the Smuggler-Union Mill, Telluride, Colo.*—Met. & Cheml. Engg., April,1912; p. 195; 1000 w*; 35c.

———. *Taxing Productive and Unproductive Mines.*—Mng. Sci., March4,1912, p. 243; 750 w; 20c.

———. *Telluride Zone in the San Juan Region.*—Mng. Sci., Feb.29,1912; p. 214; 500 w; 20c.

———. *The Colorado-Yule Marble Property* [Gunnison county].—Stone Trades Jnl., Jan.,1912; p. 1004; 1200 w*; 35c.

———. *The Parkison Furnace;* [For complete, smokeless combustion; its use at Colorado smelters].—Mng. Sci., Jan.25,1912, p. 116; 4000 w*; 25c.

———. *The Status of the Oil Industry in Colorado.*—Mining & Engg. World, Apr.6, 1912; p. 756; 750 w; 10c.

DELAWARE

Matson, G. C.—*Notes on the Clays of Delaware.*—U. S. Geol. Survey Bull., 530-I; 1912; pp. 3-19; 10c.

FLORIDA

Gilchrist, P. S.—*A Modern Fertilizer Factory;* [Describes ideal plant for treating 20,000 tons of acid phosphate per annum on Florida or Southern rock].—Amer. Fertilizer Handbook, 1912; pp. 75-84*; $1.50.

Memminger, C. G.—*Phosphate Mining in Relation to the Fertilizer Industry;* [Developments in the Southern states].—Manffrs. Record, Feb.22,1912; p. 55; 4000 w; 65c. Abstract in Amer. Fertilizer, Apr. 6, p. 46; 3600 w; 25c.

Mendenhall, H. D.—*An Efficient Cheap Dam;* [For settling ponds in Florida phosphate fields].—Engg. News, Feb.22,1912; p. 338; 1200 w*; 25c. Abstract in E. & M. J., March9, p. 491; 800 w*; 25c.

Middleton, J.—*The Production of Fuller's Earth in* 1911.—U. S. Geol. Surv., Mineral Resources for 1911; 1912; 7 pp; 10c.

Sellards, E. H.—*Roads and Road Materials of Florida.*—Flor. Geol. Surv., Bull. 2; 1911; 31 pp.; 4 plates; 50c.

Sellards, E. H.—*Florida State Geological Survey, Fourth Annual Report;* [for 1911].—Tallahassee, 1912; 175 pp*; 50c.

Stone, S. R.—*Phosphate Deposits and Mining Methods in the United States.*—Mining & Engg. World, March2,1912; p. 511; 1600 w; 10c.

Tupper, C. A.—*Modern Power Plants in Florida Phosphate District.*—Mining & Engg. World, Feb.3,1912; p. 291; 2100 w*; 10c.

Tupper, C. A.—*Equipment of a Modern Phosphate Plant in Florida;* [Pierce Works].—Mining & Engg. World, March9,1912; p. 547; 1200 w*; 10c.

Van Horn, F. B.—*Fuller's Earth in the South.*—Manfrrs. Record, Feb.22,1912; p. 69; 3000 w; 65c.

Van Horn, F. B.—*The Production of Phosphate Rock in the U. S. in* 1911.—U. S. Geol. Surv., Mineral Resources f. 1911; 1912; 14 pp.; 10c. Reprinted in Amer. Fertilizer, June1,1912; pp. 21-28; 25c.

———. *Reference List for Phosphates;* [Bibliography of world's phosphate and guano deposits, slag phosphate, etc.].—U. S. Congress (62d), 2d Session, Senate Doc. No. 190; 1912; pp. 78-106.

———. *Shipments of Phosphate Rock,* 1911; [Statistics of Florida shipments by grades, ports, vessels and destinations].—Amer. Fertilizer, Jan.27,1912; p. 37-44; 25c.

———. *Une exploitation de phosphates pebble en Amérique;* [The Prairie Pebble Phosphate Co. plant, Florida].—Phosphate, May13,1912; p. 397; 1000 w*; 35c.

GEORGIA

Booker, R. G.—*Developing Georgia Granite.*—Manfrrs. Record, Feb.8,1912; p. 53; 500 w; 25c.

Evans.—*Lookout Mountain Coal.*—See Tennessee.

McCallie, S. W.—*Pottery Plants for Georgia;* [Advantages of several proposed locations].—Manfrrs. Record, Apr.25,1912; p. 55; 500 w; 25c.

Phalen, W. C.—*Bauxite and Aluminum,* 1911.—(See Arkansas.)

Richard, L. M.—*Modern Gold Dredge in Georgia;* [California-type dredge in Dahlonega district].—E. & M. J., Apr.27,1912; p. 848; 1200 w*; 25c.

Veatch, O. and L. W. Stephenson.—*Preliminary Report on the Geology of the Coastal Plain of Georgia.*—Georgia Geol. Survey, Bull. No. 26, 1911; 466 pp*; $2 (book).

Watson, T. L.—*An Association of Native Gold with Sillimanite;* [Coosa creek, Union county].—Amer. Jnl. of Sci., March,1912; p. 241; 1200 w*; 65c.

IDAHO

Bell, R. N.—*13th Annual Report of the Mining Industry of Idaho for* 1911.—Boise, 1911; 135 pp*; $1.

Bell, R. N.—*Mining in Idaho in* 1911; [Gold, silver, lead, phosphate].—E. & M. J., Jan.6,1912, p. 69; 2000 w; 25c.

Bell, R. N.—*Lead and Silver Resources of Lemhi County, Idaho;* [Extract from 13th annual report].—Mng. Sci., May9,1912; p. 406; 2100 w*; 20c.

Bell, R. N.—*Mines and Mills of Shoshone County, Idaho;* [From 13th annual report of state mine inspector].—Mining & Engg. World, Apr.6,1912; p. 769; 3200 w*; 10c.

Brown, L. P.—*Phosphate Deposits of the Rocky Mountain States.*—Amer. Fertilizer Handbook, 1912; p. 123-128; 2500 w*; $1.50.

Hershey, O. H.—*Genesis of Lead-Silver Ores in Wardner District, Idaho.*—M. & S. P., June1,1912; p. 750; June8, p. 786; June 15, p. 825; 11,000 w*; 45c.

Huston, Geo.—*Hydro-electric Installation in the Coeur d'Alenes.*—Mining & Engg. World, Feb.3,1912, p. 281; 1800 w*; 10c.

Huston, Geo. — *Prichard Formation Rocks;* [Productivity of this formation in Coeur d'Alenes].—Mining & Engg. World, Feb.3,1912; p. 305; 1200 w; 10c.

Huston, Geo.—*The "Dry Ore Belt" Between Wallace and Wardner, Idaho.*—Mng. Sci., Jan.4,1912, p. 4; 1000 w; 20c.

Huston, Geo.—*Review of Mining in the U. S. in* 1911: *Coeur d'Alenes.*—Mining & Engg. World, Jan.27,1912; p. 214; 1000 w; 25c.

Marshall, R. B.—*Retracement of the Boundary Line Between Idaho and Washington.*—U. S. Geol. Survey, Bull. 466; 1911; 39 pp*; 10c.

Rice, S.—*Progress in the Coeur d'Alene District, Idaho.*—Mining & Engg. World, June1,1912; p. 1185; 2500 w.*; 10c.

Richards, R. W. and J. H. Bridges.—*Sulphur Deposits near Soda Springs, Idaho.*—U. S. Geol. Survey, Bull. 470-J; 1911; 1800 w*; 10c. Abstract in Mng. Sci., Sept. 14,1911. p. 254; 1800 w; 20c. Also in Mining & Engg. World, Jan.6,1911, p. 12; 1400 w; 10c.

Sheldon, G. L.—*The Yellow Jacket Mine, Idaho;* [Lemhi county].—E. & M. J., Jan. 27,1912, p. 221; 2500 w; 25c.

Scott, W. A.—*Idaho;* [Brief review of 1911].—M. & S. P., Jan.6,1912, p. 88; 1200 w*; 35c.

Scott, W. A.—*Tube Concentrator in the Coeur d'Alene* [at Morning mill, Mullan].—M. & S. P., Dec.23,1911, p. 809; 600 w; 20c.

Smith, S. B.—*Outlook in Big Creek District. Edwardsburg.*—Salt Lake Mng. Rev., Jan.30,1912; p. 28; 700 w*; 25c.

Sperling, G. — *Timber Expansion in Flumes; Causes and Remedies;* [Experiences in Boise County placers, Idaho].—Mining & Engg. World, March16,1912; p. 609; 1600 w; 10c.

Weeks, F. B.—*Phosphate Rock in the West;* [Review for 1911].—M. & S. P., Jan. 6,1912, p. 25; 600 w; 35c.

———. *Mining in the Coeur d'Alenes;* [Reviews zinc and lead production, 1911].—E. & M. J., Jan.6,1912, p. 16; 500 w; 25c.

———. *Review of Mining in the U. S. in* 1911; *Idaho* [Gold, silver-lead, copper, phosphate, coal].—Mining & Engg. World, Jan.27,1912; p. 213; 1500 w; 10c.

———. *The McQuisten Tube Mill Process;* [Oil flotation for zinc-lead slimes at Morning mill, Mullan, Idaho].—Mining & Engg. World, Jan.20,1912; p. 111; 750 w; 10c. Reprinted in Mines & Methods, Feb., 1912, p. 406; 750 w; 20c. Also in W. Australian Mng., etc., Jnl., Apr.6, p. 14; 750 w; 35c.

ILLINOIS

Bement, A.—*The Screening Problem in Illinois.*—Coal Age, June1,1912; p. 1105; 1000 w*; 20c.

Blatchley, R. S.—*Daš neue Carlyle Erdölfeld in Illinois;* [The new Carlyle oilfield in Illinois; from Petroleum Rev.].—Organ d. Bohrtechniker, Feb.1,1912; p. 34; 1000 w; 45c.

Blatchley, R. S.—*Petroleum in Illinois in* 1911.—E. & M. J., Jan.6,1912, p. 96; 1500 w; 25c. Also in Mining & Engg. World, Jan.27, p. 189; 25c.

German abstract in Allgm. Oestr. Chemiker Ztg., Apr.1,1912; p. 54; 500 w; 35c.

Chadwick, F. D.—*Longwall Mining in Illinois.*—Mines & Minerals, March,1912, p. 451; 1600 w*; 35c.

Dinsmoor, A.—*The Run of Mine System in Illinois;* [Payment of workers by gross ton].—Coal Age, March9,1912; p. 705; 1200 w; 20c.

Ijams, J. W.—*Cheap Stripping with Shovels Near Surface;* [Stripping in open-cut coal mines near Danville, Ill.].—Black Diamond, Jan.27,1912; p. 20; 1200 w*; 30c.

Abstract in M. & S. P., March16, p. 410; 800 w; 20c.

Lettsome. A. R.—*Working Longwall in the Coal Mines of Illinois;* [Discusses modifications required by state ventilation laws].—Black Diamond, Feb.10,1912; p. 19; 1000 w*; 30c.

Peltier, M. F.—*Mining Methods in Illinois;* [Peabody Coal Co., No. 3 mine, Marion].—Coal Age, March16,1912, p. 732; 2000 w*; 25c.

Shaw, E. W.—*New Carlyle Oil District of Southern Illinois;* [Geol. Survey notes].—Mining & Engg. World, Dec.30,1911, p. 1326; 500 w; 10c.

Stoek, H. H.—*Mine Rescue Service of the State of Illinois.*—Amer. Inst. Mng. Engrs., Bull., Dec.,1911, pp. 951-960*; $1.15. Abstract in Canadian Mng. Jnl., Jan.1,1912; p. 24; 2600 w; 25c. Also in Coll'y Guardn., Feb.9, p. 279; 2000 w*; 30c. Also in Coal Age, Feb.17, p. 598; 2000 w*; 20c.

Tupper, C. A.—*Mining of Shallow Deposits with Steam Shovels;* [Missionfield, Ill., coal mines].—Mining & Engg. World, Jan. 13,1912; p. 59; 1500 w*; 10c.

Udden, J. A.—*Geology and Mineral Resources of the Peoria Quadrangle, Illinois;* [Chiefly coal and brick and tile].—U. S. Geol. Surv., Bull. 506; 1912; 101 pp*; 10c.

Wheeler, H. A.—*Developments in the Illinois Oil Fields.*—Assoc. of Engg. Soc.'s, Jnl.; February,1912; pp. 68-77; 40c.

Williams, R. Y.—*Extinguishing the Majestic Mine Fire;* [Use of helmets in Franklin county, Ill.].—Mines & Minerals, Jan., 1912, p. 342; 3000 w*; 35c.

State Mining Board.—*Thirtieth Annual Coal Report of Illinois;* [For year ended June 30, 1911].—Springfield, 1912; 445 pp; 50c.

———. *Chicago and Its Brick and Clay Industry.*—Brick, Feb.15,1912; p. 163-175*; 20c.

———. *Coal Production in Illinois by Companies for the Year Ending June* 30, 1911; [From 30th annual coal report of

State Mining Board of Ill.].—Coal Trade Bull., Feb.15,1912; p. 35-40; tables; 25c.

———. The *Illinois Coal Industry in* 1911.—Coal Age, Jan.6,1912, p. 406; 1500 w; 20c.

INDIANA

George, H. C.—*The Lima Oilfield in* 1911. —E. & M. J., Jan.6,1912, p. 97; 200 w; 25c.

Pearce, F. I.—*Indiana Coal Industry in* 1911.—Coal Age, Jan.6,1912, p. 407; 500 w; 20c.

———. *Abandoned Indiana Wells;* [From "Petroleum Gazette"].—Well Drillers' News, May,1912; p. 14; 1000 w; 10c.

———. *A Model Lime-producing Plant;* [Mitchell, Indiana].—Rock Products, May, 1912; p. 46; 1500 w; 30c.

———. *The World's Largest By-Product Coke Plant* [at Gary, Ind.].—Iron Trade Rev., Dec.21,1911, p. 1093; 2700 w*; 20c.

———. *Universal Portland Cement Co. Plan No.* 6; [Buffington].—Cement Age, Dec.,1911, p. 260; 1500 w*; 25c.

IOWA

Bain, H. F.—*Ore Not in Sight*; [Describes zinc ore-shoots in Dubuque, Iowa, region]. —M. & S. P., March,1912; p. 337; 500 w*; 15c.

Beyer, S. W.—*The Mineral Production of Iowa in* 1910; [Coal, clays, stone and lime, gypsum, lead-zinc, sand-lime, etc.].— Iowa Engr., Dec.,1911, p. 81; 1000 w; table; 35c.

Beyer, S. W.—*Iowa's Rank as a Brick Producer and Future Prospects;* [Read to Iowa Brick & Tile Asso.].—Iowa Engr., May,1912; pp. 315-323*; 3000 w*; 30c.

Rhys, R. T.—*Review of Iowa Mine Explosions.*—Coal Age, May11,1912; p. 1004; 2000 w; 20c.

Stamm, L. E.—*Coal Industry in Iowa in* 1911.—Coal Age, Jan.6,1912, p. 407; 1000 w; 20c.

Verner, J.—*Causes of Iowa Mine Explosions;* [In dry, non-gaseous mines].—Coal Age, Feb.3,1912; p. 545; 3300 w; 20c.

Iowa Asso. of Cement Users.—*Proceedings of the Seventh Annual Convention.*— Iowa Engr., Feb.,1912; pp. 139-219; 25c.

———. *Maple Block Coal Co., Des Moines, Iowa;* [Mine and power plant].— Electr. Mng., April,1912; p. 29-42*; 20c.

———. *Fort Dodge Clay Industries.*— Brick, Jan.1,1912; p. 23; 1000 w*; 20c.

———. *New Cement Plants at Trident, Montana and Mason City, Iowa.*—Cement Age, Dec.,1911, p. 263; 1100 w*; 25c.

———. *The World's Greatest Gypsum Mill;* [U. S. Gypsum Co. mill and mines at Fort Dodge, Iowa].—Rock Products, Dec., 1911, p. 3, p. 54; 1500 w*; 25c.

KANSAS

For "Joplin district," see Missouri.

Buckley, E. R.—*Lead and Zinc Deposits of Ozark Region.*—See under Missouri.

Butler and Dunlop.—*Metal Production in the Central States,* 1911.—See under Michigan.

Haworth, E.—*Oil and Gas in Mid-Continental Field;* [Review of progress in 1911]. —E. & M. J., Jan.6,1912, p. 95; 1500 w: 25c.

Ruhl, O.—*Review of Mining in the U. S. in* 1911; *Missouri-Kansas Zinc-Lead.*— Mining & Engg. World, Jan.27,1912; p. 220; 2700 w; 25c.

Wittich, L. L.—*History of Kansas Oil Development.*—Mines & Minerals, Jan., 1912; p. 384; 300 w; 35c.

"A Smelter."—*Zinc Smelting in Kansas and Oklahoma.*—E. & M. J., Apr.27,1912; p. 849; 3200 w; 25c.

———. *Buffville, the Brick Town;* [Brick industry at Buffville].—Brick, Apr. 15,1912; p. 359; 750 w*; 20c.

KENTUCKY

Butler, J. E.—*Stearns Mines in Kentucky;* [Abstract; read to Kentucky Mng. Inst.]—Coal Age, Dec.23,1911, p. 341; 1500 w*; 20c. Also in Mines & Minerals, March, 1912, p. 481; 1600 w*; 35c.

Griffith, W. T.—*Double Tipple for Colonial Coal Co.;* [Prestonsburg, Ky.].—Coal Age, Apr.20,1912; p. 906; 1500 w*; 20c.

Hudson, W. B.—*Kentucky Oil Fields;* [Review for 1911 and more recent developments].—Manfrrs. Record, Feb.1,1912; p. 68; 750 w; 25c.

Munn, M. J.—*The Campton Oil Pool, Ky.* —U. S. Geol. Surv., Bull. 471-A; pp. 5-13*; 10c. Abstract in Mining & Engg. World, June22,1912; p. 1306; 500 w; 10c.

Munn, M. J.—*Oil and Gas Development in Knox County, Ky.*—U. S. Geol. Surv., Bull. 471-A; pp. 14-25*; 10c.

Waggaman, W. H.—*A Report on the Natural Phosphates of Tennessee, Kentucky and Arkansas.*—U. S., 62d Congr., 2d Session; Senate Document No. 190; pp. 49-77*. Reprinted as Bull. 81 of U. S. Bureau of Soils, March20,1912; 36 pp*.

Wheelwright, J. H.—*Coal Development in Eastern Kentucky;* [Consolidation Coal Co. plans].—Manfrrs. Record, Feb.22, 1912; p. 49; 2000 w; 25c. Also in Coal Trade Bull., March15, p. 30; 1800 w; 25c.

———. *Progress in Kentucky Geology;* [Coal fields].—Mines & Minerals, June, 1912; p. 649; 1500 w; 35c.

———. *Stripping Made Possible by Improved Machines;* [Practice in eastern Kentucky coal fields].—Black Diamond, Apr.20, 1912; p. 20; 1500 w*; 30c.

LOUISIANA

Day, D. T.—*Vast Storehouse of Fuel in Southern Petroleum and Natural Gas.*— See under West Virginia.

[Frasch, H.].—*Presentation of the Perkin Medal to Herman Frasch;* [Reviews Frasch's work on de-odorizing of Ontario petroleum and on Louisiana sulfur].—Met. & Chemi. Engg., Feb.,1912; p. 73; 8000 w*; 35c. Also in Jnl. of Indl. & Engg. Chemy., Feb., p. 128-140; 8000 w; 65c. Also in Soc. of Chemi. Indy, Jnl., Feb.29. p. 169; 8000 w; 65c.

Italian abstract on Louisiana sulphur development, in Rassegna Mineraria, March 11, p. 162; 2400 w; 35c.

Lucas, A. F.—*Geology of Calcasieu Mines and Sulfur-Oil Fields of the Coastal Plain;* [Address at presentation of Perkins medal to Dr. H. Frasch].—Met. & Chemi. Engg., Feb.,1912; p. 80; 2100 w; 35c. Also in Jnl. of Indl. & Engg. Chem'y, Feb., p. 140; 2800 w; 65c. Also in Soc. of Chemi. Ind'y Jnl., Feb.29, p. 173; 2000 w; 65c.

Phalen, W. C.—*Sulphur, Pyrite and Sulphuric Acid in* 1911; [Production in U. S., with "Notes on the Manufacture of Sulphuric Acid From Smelter Fumes at Ducktown, Tenn.," by F. B. Laney; pp. 24-30].— U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 30 pp.; 20c.

Pough, F. H.—*Sulphur Mines of the Union Sulphur Co. in Louisiana;* [Read to

Soc. of Chem'l Ind'y, N. Y.].—Jnl. of Ind'l & Engg. Chem'y, Feb.,1912; p. 143; 1800 w*; 65c. Also in Soc. of Chem'l Ind'y Jnl., Feb.29, p. 175; 1400 w; 65c.

Wooton, Paul.—*Louisiana Salt Mines; Their Operation and Output.*—Mining & Engg. World, Feb.17,1913; p. 401; 1000 w*; 10c.
Reprinted in Mines & Methods; March, p. 441*; 20c.

———. *From the Caddo, Louisiana, Field;* [Natural-gas developments].—Nat. Gas Jnl., May,1912; p. 183; 2500 w; 35c.

MAINE

Katz, F. J.—*Clay in the Portland Region, Me.*—U. S. Geol. Survey Bull, 530-I; 1912; pp. 20-24*; 10c.

Spotswood, A.—*Occurrence and Uses of American Tourmalines;* [Describes chiefly Himalaya mines, San Diego county, Cal.]. —Mining & Engg. World, Dec.23,1911, p. 1280; 2000 w; 10c.

MARYLAND

Althouse, W. D.—[*New Binder-Briquetting System for Thin-Bedded Coals, at Phoenix, Md., and Elsewhere*].—Black Diamond, Apr.6,1912; p. 18, p. 21; 1200 w*; 30c.

———. *The New Tidewater Portland Cement Plant at Union Bridge, Maryland.* —Engg. Record, Apr.13,1912; p. 410; 3000 w*; 20c.

———. *The Potomac Refining Co.;* [Lime and hydrating plant near Harper's Ferry].—Rock Products, Apr.,1912; p. 3; p. 39; 500 w*; 30c.

MICHIGAN-MINNESOTA AND LAKE SUPERIOR REGION

(a) Iron

Ballat, B. W.—*The Newport Iron Mine;* [Gogebic range; history, geology, mining equipment and practice].—Amer. Inst. Mng. Engrs., Trans. for Oct.,1911; pp. 903-921*; $1.15.

Baxter, Chas. H.—*Diversion of the Sturgeon River at the Loretto Mine;* [to permit iron mining about river bed].—Lake Superior Mng. Inst., Proc., 1911; pp. 168-170*.

Burr, F. L.—*Square Set Mining at the Vulcan Mines.*—Lake Superior Mng. Inst., Proc., 1911; pp. 144-155*.
Abstract in Mining & Engg. World, Jan. 13,1912, p. 65; 2500 w*; 10c. Also in Mines & Methods, Feb., p. 409; 2500 w*; 25c. Also in Mines & Minerals, May, p. 613; 2000 w*; 35c.

Cayeux, L.—*Existence de restes organiques dans les roches ferrugineuses associées aux minérais de fer Huroniens des Etats Unis;* [Existence of echinoderms and other fossils in the Huronian iron-bearing formations in the U. S.].—Acad. d. Sci., Paris, C-R.; Vol. 153, 1911; pp. 910-912; $1.

Clark, W. A.—*Iron-Ore Docks on the Lakes;* [Statistical record of shipping docks on Lakes Superior and Michigan, with dimensions, capacities, etc].—Iron Age, May 16,1912; p. 1227; 500 w; table; 30c.

Concklin, B. M.—*Special Method of Mining on Dangerous Ground on the Mesaba Range, Minnesota;* [Square-set under weak cover].—Wisconsin Engr., Apr.,1912; p. 326; 500 w*; 30c.
Reprinted in Mng. Sci., May9, p. 413*; 20c. Also in Mining & Engg. World, May 25, p. 1098*; 10c. Also in E. & M. J., June 22, p. 1219*; 25c.

Conlin, T. and P. O'Brien.—*Historical Sketch of Menominee Range, and Description of Mines on the Menominee Range.*— Lake Superior Mng. Inst., Proc., 1911; pp. 7-41.

Cushing, G. H.—*Iron Ore Movement on the Great Lakes in* 1911.—M. & S. P., Jan. 6,1912, p. 43; 2800 w; 35c.

Dresser, H .L.—*Experience with Steel Ties under Heavy Ore Traffic;* [Duluth, Missabe & Northern Ry., Minnesota; from Proc. of Amer. Ry. Engg. Asso.].—Engg. Record, March30,1912; p. 345; 1000 w; 20c.

Edwards, Geo. E.—*Review of Mining in the U. S.; Lake Superior Iron.*—Mining & Engg. World, Jan.27,1912; p. 217; 5000 w; 25c.

Edwards, Geo. E.—*The Chapin Mine of the Oliver Iron Mng. Co.;* [Menominee range].—Mining & Engg. World, March2, 1912; p. 499; 1200 w*; 10c.

Edwards, G. E.—*The Metallization of Low-Grade Iron Ores;* ["Step" process of J. T. Jones for reducing iron ore at Iron Mt., Mich., without smelting gangue].— Mining & Engg. World, March9,1912; p. 553; 3000 w; 10c.

Edwards, Geo. E.—*Electrification of the Penn Mines, Menominee Range, Mich.*— Mining & Engg. World, March16,1912; p. 593; 2500 w*; 10c.

Edwards, Geo. E.—*Mining Practice in Pioneer District of Iron Range;* [Hoisting and mining practice south of Menominee river in Wisconsin].—Mining & Engg. World, Apr.27,1912; p. 907; 2000 w*; 10c.

Estep, H. C.—*A Quiet Year on the Minnesota Iron Ranges;* [Review of Mesabi, Vermilion and Cuyuna ranges, 1911].—Iron Trade Rev., Jan.4,1912; p. 26-36*; 60c.

Hearding, J. H.—*Reminiscences of the Gogebic Range, Ironwood in* 1887.—Lake Superior Mng. Inst., Proc., 1911; pp. 244-250.

Jones, J. T.—*The Jones Process for "Metallizing" Ore;* [Step process for reducing iron ore at Iron Mtn., Mich., without smelting gangue].—Iron Age, Dec.14, 1911, p. 1305; 1100 w; 30c. Also in E. & M. J., Feb.24, p. 912; p. 400; 25c.

King, W. E.—*A Concrete and Steel Ore Dock Having New Features in its Design;* [Allouez Bay, Wis.].—Engg. Record, March 9,1912; p. 256; 2700 w*; 20c.

Lauck, W. J.—*The Iron-Ore Miner of Northern Michigan.*—Mining & Engg. World, March9,1912; p. 559; 3000 w; 10c. p. 586; 600 w; 25c.

Lauck, W. J.—*Iron-Ore Mines on Mesabi and Vermillion Ranges;* [Labor conditions and nationalities of employes].—Mining & Engg. World, Dec.23,1911, p. 1269; 2000 w; 10c.

Leith, C. K.—*Iron-Ore Reserves of Michigan in* 1911.—U. S. Geol. Surv., Mineral Resources for 1911; 18 pp*; 10c. Abstract in M. & S. P., June8,1912; p. 799; 2200 w; 20c.

Leith, C. K.—*The Lake Superior Type of Iron-Ore Deposits.*—"Types of Ore Deposits," by H. F. Bain and others; 1911; pp. 53-76.

Leith, C. K. and E. C. Harder.—*Hematite Ores of Brazil, and a Comparison with Hematite Ores of Lake Superior.*— Econ. Geol'y, Oct.-Nov.,1911, p. 670-687; 65c.
Abstract in Iron & Coal Trades Rev., Feb.2,1912; p. 170; 5000 w*; 30c. Also in M. & S. P., Jan.27, p. 172; 1100 w*; 20c.

Low, V. F. S.—*Impressions Gathered While Traveling;* [Includes notes on iron mining on Mesabi range].—Australian Mng. Standd., Apr.11,1912; p. 337; 1600 w*; 35c.

McDonald, P. B.—*Iron River District, Mich.*—E. & M. J., Jan.27,1912, p. 210; 1500 w*; 25c.

McEachern, Wm. A.—*Top-Slicing at the Caspion Mine.*—Lake Superior Mng. Inst., Proc., 1911; pp. 239-243*.

Abstract in Mining & Engg. World, Jan. 20,1912; p. 119; 1000 w*; 10c. Also in Mines & Methods, Feb., p. 418; 800 w*; 25c.

Roberts, F. C.—*Block-Caving and Sub-Stope System at the Tobin Mine, Crystal Falls, Mich.*—Lake Superior Mng. Inst., Proc., 1911; pp. 218-226*.

Abstract in Mng. Sci., Aug. 31, 1911, p. 207; 1100 w; 20c. Also in M. & S. P., Sept. 2, p. 491; 1100 w; 20c. Also in Mining & Engg. World, Sept.23, p. 576; 1200 w; 10c. Also in Mex. Mng. Jnl., Feb., p. 33; 1000 w; 25c. Also in Mines & Minerals, June, p. 674; 1200 w*; 35c.

Thomas, K.—*Non-Bessemer Ore Will Probably Be Principal Product of the Cuyuna Range.*—Iron Trade Rev., May30, 1912; p. 1178; 1000 w; 20c.

Tupper, C. A.—*Power System, Cleveland Cliffs Iron Co.;* [Carp River hydro-electric plant, steam auxiliary].—Power, Jan.9, 1912; p. 40; 1200 w*; 20c. Also in E. & M. J., Feb.3, p. 274; 1200 w*; 25c.

Tupper, C. A.—*Hydro-Electric Power for Minnesota Ranges;* [Gt. Northern Power Co. developments].—Mining & Engg. World, March23,1912; p. 643; 3600 w*; 10c.

White, E. E.—*Surveying and Sampling Diamond Drill Holes;* [Surveying deflected prospect borings in Lake Superior iron region].—Lake Superior Mng. Inst., Proc., 1911; pp. 100-120*.

Abstract in E. & M. J., Sept.23,1911. p. 587; 3500 w*; 25c. Also in Mines & Minerals, Oct., p. 167; 4500 w*; 35c. Also in Mex. Mng. Jnl., Oct., p. 23; 4500 w*; 25c. Also in Engg. & Contractg., Oct.4, p. 345; 4500 w*; 20c. Also in Mining & Engg. World, Nov.25, p. 1061; 3500 w*; 10c.

Winchell, N. H.—*A. Diamond Drill Core Section of the Mesabi Rocks. IV;* [Petrography and genesis of Mesabi iron ores].—Lake Superior Mng. Inst., Proc., 1911; pp. 61-69. Reprint in Mining & Engg. World, Aug.26,1911, p. 377; 3000 w; 10c.

Woodbridge, D. E.—*Beneficiating Lake Iron Ores.*—E. & M. J., Jan.27,1912, p. 222; 1800 w; 25c.

Woodbridge, D. E.—*Lake Superior Ore Developments;* [Review for 1911].—Iron Age, Jan.4,1912, p. 65; 3000 w; 65c. Also in Engg. & Mng. Jnl., Jan.6, p. 31; 2100 w; 25c.

Youngs, M. P.—*Year of Activity on Old Ranges;* [Review of iron mining in Lake Superior region in 1911].—Iron Trade Rev., Jan.4,1912; p. 47; 2000 w; 65c.

Zapffe, C.—*Effects of a Basic Igneous Intrusion on a Lake Superior Iron-Bearing Formation;* [Gunflint district, Minn.].—Econ. Geol'y, Feb.-March,1912; pp. 145-178*; 65c.

———. *A Modern Iron-Ore Dock and Unloading Plant;* [Penn. R. R. docks at Cleveland].—Iron Trade Rev., Apr.18,1912; p. 845; 3500 w*; 20c.

———. *Concrete Ore Dock at Cleveland, Ohio.*—Engg. News, Feb.22,1912; p. 320; 4200 w*; 25c. Also in Engg. Record, Feb. 24, p. 212; 2100 w*; 25c.

———. *Cuyuna Iron Range;* [Recent developments].—E. & M. J., May25,1912; p. 1025; 1000 w; 25c.

———. *Description of the World's Largest Ore Dock;* [Allouez, Wis.; for Mesabi Range iron ores].—Iron Trade Rev., Jan.18, 1912; p. 191; 2500 w*; 20c.

———. *Eight-Hour Shift in Lake Superior Iron Mines.*—E. & M. J., March23,1912;

———. *Iron Ore Railroads and Docks in Superior Region.*—E. & M. J., June15, 1912; p. 1188; 1200 w; 25c.

———. *New Ore Dock at Two Harbors, Lake Superior, Minn.*—Iron Trade Rev., Dec.28,1911, p. 1143; 2000 w*; 25c.

———. *Power Plant for Upper Michigan Mines;* [Carp River plant of Cleveland Cliffs Iron Co.].—Iron Age, May2,1912; p. 1077; 2000 w*; 30c.

———. *Replacing a Timber Ore Dock with a Concrete and Steel Structure* [at Two Harbors, Minn.].—Engg. Record, May 4,1912; p. 496; 1000 w*; 25c.

(b) Copper

Aikens, W.—*The Hancock Con. Mine, Mich., and its Equipment.*—Mining & Engg. World, Apr.13,1912; p. 805; 1800 w*; 10c.

Abstract in Mining & Engg. World, Nov. 25,1911, p. 1064; 4800 w*; 10c. Also in Iron Trade Rev., Jan.25,1912; p. 243; 4500 w*; 20c.

Butler, B. S.—*The Production of Copper in 1910;* [Review of mine, smelter and refinery output in U. S.].—U. S. Geol. Survey, Minrl. Resources of U. S. for 1910; 1911; 70 pp.; 10c.

Butler, B. S., and J. P. Dunlop.—*Metal Production in the Central States;* [Preliminary U. S. Geol. Survey figures for 1911 on lead, zinc, copper, silver in Michigan, Wisconsin, Kansas, Arkansas and Oklahoma].—M. & S. P., May25,1912; p. 729; 1500 w; tables; 20c.

Edwards, G. E.—*The Quincy Mine, Mich., from Stope to Smelter.*—Mining & Engg. World, Apr.20,1912; p. 853; Apr.27, p. 897; 4800 w*; 20c.

Fichtel, C. L. C.—*The Lake Superior District in 1911;* [Copper review].—E. & M. J., Jan.6,1912, p. 11; 1800 w; 25c.

Hore, R. E.—*Decrease of Values in Ore Shoots with Depth;* [Michigan copper; Cobalt, Ont., silver; Porcupine, Ont., gold].—Canadian Mng. Jnl., Apr.15,1912; p. 260; 4000 w; 25c.

Hore, R. E.—*The Copper Mining Industry of Michigan;* [Abstract of monograph of Michigan Geol. Survey].—Mining & Engg. World, March16,1912; p. 601; March 23, p. 656; March30, p. 707; Apr.6, p. 763; 16,000 w*; 50c.

Johns, B. S.—*Henry Johns, an Early American Copper Refiner;* [Reviews history of first smelting of Lake Superior copper in 1847].—E. & M. J., June15,1912; p. 1183; 1200w; 25c.

Jones, E. R.—*Methods of Constructing and Placing Reinforced Concrete Sets in Sinking Shafts for the Ahmeek Mining Co., Michigan;* [Read to Michigan College of Mines Club, Houghton; 1912].—Mining & Engg. World, May25,1912; p. 1093; 2600 w; 10c. Also in Engg. & Contractg., May 22,1912; p. 570; 1200 w; 20c. Also in Mng. Sci., May23, p. 453; 2600 w; 20c. Also in Mines & Methods, June, p. 504; 2100 w; 20c.

Hosking, J.—*The Tomahawk Lode;* [History of discovery of Calumet & Hecla mine].—E. & M. J., Apr.20,1912; p. 777; 500 w; 25c.

Lane, A. C.—*Native Copper Deposits.*—"Types of Ore Deposits," by H. F. Bain and others; 1911; pp. 133-139*.
Reprinted from Canadian Mng. Inst., Bull., 1911. Abstract in Mining & Engg. World, April8,1911, p. 731; 2700 w; 10c. Also in W. Australian Mng., etc., Jnl., May 27,1911, p. 8; 2700 w; 35c. Also in Mng. Sci., Feb.29,1912, p. 211; 2700 w; 20c.

Maurer, R. H.—*Review of Lake Superior Copper Mining in* 1911.—M. & S. P., Jan.6, 1912, p. 92; Jan.13, p. 106; 4000 w; 45c.

Meuche, A. H.—*Some Practical Suggestions for Diamond-Drill Explorations;* [with special reference to Superior copper region] —Lake Superior Mng. Inst., Proc., 1911; pp. 77-81*.
Abstract in Mng. Sci., Sept.7,1911, p. 220; 1500 w*; 20c. Also in M. & S. P., Sept.16, p. 357; 700 w*; 20c. Also in Mines & Methods, Sept., p. 317; 1000 w*; 20c. Also in Mining & Engg. World, March30, p. 706; 1500 w*; 10c.

Paterson, Alex.—*Copper Mining in America at Great Depths;* [Describes mining practice at Calumet & Hecla mine; read to Scot. Fed. Inst. of Mng. Students, Western branch].—Iron & Coal Trades Rev., March 29,1912; p. 486; 3500 w*; 35c.

Perkins, W. J.—*A Lake Superior Copper Mine Plant; Surface Equipment of the Hancock Cons. Mng. Co.*].—Mine & Quarry, March,1912; pp. 589-594*; 25c. Abstract in M. & S. P., March30,1912; p. 469; 1200 w*; 20c.

Rice, C. T.—*Baltic Method of Mining.*—E. & M. J., Apr.27,1912; p. 843; May4, p. 897; May11, p. 947; 15,000 w*; 65c.

Rice, C. T.—*Labor Conditions at the Calumet & Hecla, Mich.*—E. & M. J., Dec. 23,1911, p. 1235; 4000 w*; 25c.

Stevens, H. J.—*Review of Mining in the U. S. in* 1911; *Lake Superior Copper.*—Mining & Engg. World, Jan.27,1912; p. 215; 3500 w; 10c.

———. *Calumet & Hecla Operations During* 1911; [Abstract of annual report].—Mining & Engg. World, June1,1912; p. 1152; 750 w; 10c.

———. *Costs at Tamarack, Anaconda, Copper Range and Calumet & Arizona.*—E. & M. J., June8,1912; p. 1131; 2000 w; 25c.

(c) Miscellaneous

Edwards, Geo. E.—*Michigan's New Law Taxing Reserved Mineral Rights.*—Mining & Engg. World, Dec.23,1911, p. 1268; 500 w: 10c.

McDonald, P. B.—*Compensation to Injured Workmen in Michigan.*—E. & M. J., March2,1912, p. 463; 600 w; 25c.

McDonald, P. B.—*Taxation of Mineral Rights in Michigan;* [Taxing undeveloped ore].—E. & M. J., Jan.13,1912, p. 108; 1300 w; 25c.

Middleton, J.—*The Production of Sand-lime Brick in the U. S. in* 1911.—U. S. Geol. Surv., Mineral Resources f. 1911; 1912; 5 pp; 20c.

Reagan, A. B.—*Mining in St. Louis and Koochiching Counties, Minnesota;* [Gold and iron].—Mining & Engg. World, June1, 1912; p. 1150; 750 w; 10c.

———. *Consolidated Coal Washery at Saginaw, Mich.*—Mines & Minerals, March, 1912, p. 468; 1000 w*; 35c.

———. *Gold in Michigan.*—E. & M. J., May18,1912; p. 1000; 1000 w; 25c.

———. *Michigan Graphite Production;* [Review, 1911].—Mining & Engg. World, Dec.16,1911, p. 1226; 200 w; 10c.

———. *Taxing Reserved Mineral Rights in Michigan.*—Mining & Engg. World, Apr. 27,1912; p. 896; 500 w; 10c.

———. *The Large Crusher at the Biwabik Mine;* [Crushes 1000 tons of taconite ore hourly].—Iron Trade Rev., Feb.15,1912; p. 387; 1600 w*; 20c.

———. *The Minnesota Steel Co.'s New Plant at Duluth.*—Iron Trade Rev., Feb.8, 1912; p. 349; 2100 w*; 20c.

MISSISSIPPI

———. *Iron Ore in Mississippi.*—Iron Age, May23,1912; p. 1289; 400 w; 30c.

MISSOURI.

Bruce, Jas. L.—*Ore Dressing in the Joplin District.*—E. & M. J., Feb.24,1912; p. 405; March2, p. 459; March9, p. 501; March 16, p. 553; 15,000 w*; 75c.

Bryant, F. C.—*Process for Separating Blende from Barite;* [in central Missouri].—E. & M. J., May11,1912; p. 929; 750 w; 25c.

Buckley, E. R.—*Lead and Zinc Deposits of the Ozark Region;* [Southeast and central Missouri, Joplin district, and Missouri-Arkansas].—"Types of Ore Deposits," by H. F. Bain and others; 1911; pp. 103-132*.

Buskett, E. W.—*Canvas-Table Tests for Recovering Lead Slimes;* [In Joplin district, Mo.].—Mining & Engg. World, February24,1912; p. 456; 1000 w; 10c.

McLellan, J. J.—*Mining and Milling in the Joplin District.*—Canadian Mng. Jnl., March1,1912, p. 159; 1800 w*; 25c.

Rice, C. T.—*Joplin Jigging Practice.*—E. & M. J., May18,1912; p. 983; 1800 w; 25c.

Rice, C. T.—*Joplin Hand Jig.*—E. & M. J., June1,1912; p. 1079; 1800 w*; 25c.

Rice, C. T. — *Stationary Dewatering Screen;* and *Steel Tray and Support for Hancock Jigs;* [in Flat River lead district of southeast Missouri].—E. & M. J., June 15,1912; p. 1177; 1000 w*; 25c.

Ruhl, O.—*Review of Mining in the U. S. in* 1911; *Missouri-Kansas Zinc-Lead.*—Mining & Engg. World, Jan.27,1912; p. 220; 2700 w; 25c.

Wheeler, H. A.—*Southeastern Missouri in* 1911; [Lead review].—E. & M. J., Jan.6, 1912, p. 17; 2100 w; 25c.

Wittich, L. L.—*The Joplin District in* 1911.—Mines and Minerals, Feb.,1912; p. 447; p. 433; 1500 w; 35c.

Wittich, L. L.—*Following the Ore in Joplin Mines;* [Drifting and development methods in "sheet ground," disseminated ore and "soft ground"].—Mines & Minerals, April, 1912; p. 556; 2500 w*; 35c.

Zook, J. A.—*The Joplin District in* 1911; [Statistical review].—E. & M. J., Jan.6,1912, p. 24; 1500 w; tables; 25c.

———. *Joplin Lead and Zinc Production,* 1911.—M. & S. P., Jan.13,1912, p. 109; 500 w; table; 20c.

———. *Joplin Zinc-Ore Prices;* [Discusses basis].—Mining & Engg. World, Feb. 10,1912.; p. 363; 550 w; 10c.

———. *Protest Against Lead-Zinc Tariff Reduction;* [Comparative costs in Mexico and in Joplin district, Mo.].—Mining & Engg. World, March2,1912; p. 512; 1200 w; 10c.

MONTANA

Bastin, E. S.—*The Production of Graphite in* 1911.—U. S. Geol. Surv., Mineral Resources f. 1911; 1912; 38 pp*; 20c.
Abstract on deposits near Dillon; in

Mng. Sci., May30,1912; p. 467; 1000 w*; 20c.

Butler, B. S.—*The Production of Copper in* 1910; [Review of mine, smelter and refinery output in U. S.].—U. S. Geol. Survey, Minrl. Resources of U. S. for 1910; 1911; 70 pp.; 10c.

Brown, L. P.—*Phosphate.*—See Idaho.

Copenharve, Chas.—*Copper Precipitation at Butte, Mont., a Paying Industry;* [From mine waters].—Mining & Engg. World, March30,1912; p. 720; 1200 w; 10c.

Copenharve, Chas.—*Review of Mining in the U. S. in* 1911; *Montana;* [Copper, gold, silver, zinc].—Mining & Engg. World, Jan. 27,1912; p. 222; 6500 w; 25c.

Fisher, F. L.—*Montana in* 1911 [Review of copper; gold mining and dredging; zinc, silver, lead].—E. & M. J., Jan.6,1912, p. 63; 3000 w; 25c.

Heywood, W. E.—*Basic Lining;* [Results at Butte].—Mng. Mag., April,1912; p. 287; 1000 w; 45c.

Ingalls, W. R.—*Some Observations in Butte.* [Copper ore bodies].—E. & M. J., March16,1912, p. 549; 2100 w; 25c.

Jennings, H.—*Gold Dredging at Ruby, Montana.*—M. & S. P., Jan.6,1912, p. 84; 1500 w*; 35c.

Kirk, Chas. T.—*Conditions of Mineralization in the Copper Veins at Butte, Mont.* —Econ. Geol'y, Jan.,1912; pp. 35-82*; 65c. Abstract in Mng. Sci., Apr.4, p. 311; 3200 w; 20c.

Lauck, W. J.—*The Metal Miners of the Butte District, Mont.*—Mining & Engg. World, Feb.3,1912; p. 299; 2300 w; 10c.

Low, V. F. S.—*Impressions Gathered While Traveling;* [Includes notes on Washoe smelter]. — Australian Mng. Standd., Apr.11,1912; p. 337; Apr.18, p. 362; 5000 w*; 65c.

McDermott, J. B.—*Montana Coal Industry in* 1911.—Coal Age, Jan.6,1912, p. 408; 1500 w; 20c.

McGee, G. T.—*Gold-Silver Mines of Montana;* [Review for 1911].—M. & S. P., Jan. 6,1912, p. 83; 2000 w*; 35c.

Rogers, A. F.—*Baddeleyite from Montana;* [Native zirconia from corundum deposits near Bozeman, Mont.].—Amer. Jnl. of Sci., Jan.,1912; p. 54; 1200 w; 65c.

Rogers, A. F.—*On Corundum-Syenite-Uralose from Montana.*—Jnl. of Geol'y, Nov.-Dec.,1911; pp. 748-751; 65c.

Thayer, B. B.—*The Mines of Butte in* 1911.—E. & M. J., Jan.6,1912, p. 10; 500 w; 25c.

Villars, J. R.—*The Barker District, Montana.*—E. & M. J., Feb.3,1912; p. 275; 800 w; 20c.

Walsh, Wm.—*Montana Ranks High as a Metal Producer;* [Annual report for 1911]. —Mining & Engg. World, Dec.16,1911, p. 1217; 2200 w; 10c.

Whyte, F. W. C.—*Annual Address, President of the Montana Society of Engineers;* [Includes progress in copper mining and smelting, and coal].—Asso. of Engg. Soc's; Jnl.; May.1912; p. 266-273; 40c.

Winchell, H. V., and A. N.—*Notes on the Blue Bird Mine;* [Geology].— Econ. Geol'y, April-May,1912; p. 287-294*; 65c.

State Mining Dept.—*Mining Laws of the State of Montana, Compiled from the Revised Codes of* 1907, *and Session Laws of* 1909-1911.—Helena, Mont.; 1911; 106 pp; 50c.

———. *Amalgamated Shows Great Improvement in Earnings;* [Report for year ended Apr. 30, 1912; abstract].—Mining & Engg. World, June15,1912; p. 1238; 1000 w; 10c.

———. *Anaconda Copper Mining Co.;* [Annual report for 1911; summary].—E. & M. J., May18,1912; p. 977; 1000 w; 25c.

———. *Costs at Tamarack, Anaconda, Copper Range and Calumet & Arizona.*— E. & M. J., June8,1912; p. 1131; 2000 w; 25c.

———. *Coal Mining Companies of Montana;* [Directory, with 1911 production].— Coal & Coke Op., Jan.18,1912, p. 44; 1000 w; 25c.

———. *Montana in* 1911; [Copper review].—Mng. Jnl., Jan.6,1912, p. 19; 4000 w; 35c.

———. *New Cement Plants at Trident, Montana and Mason City, Iowa.*—Cement Age, Dec.,1911, p. 263; 1100 w*; 25c.

———. *The Bradley Process;* [Chlorination extraction of gold, silver and copper from waste copper slimes at Washoe concentrator].—Mng. Jnl., Apr.6,1912; p. 326; 1200 w; 35c.

———. *The Butte Central Co.'s New Concentrating Plant.*—Mining & Engg. World, May25,1912; p. 1097; 1000 w; 10c.

NEVADA

Ackerman, H. F.—*The Nevada Wonder Mining Co.*—Salt Lake Mng. Rev., March30, 1912; p. 11; 1500 w*; 25c.

Adamson, L. F.—*The Year Among Nevada Mines and Mills;* [Gold, silver, copper and zinc in 1911].—M. & S. P., Jan.6,1912, p. 75; 3000 w; 35c.

Barndt, V.—*Government Bureaus and Potash;* [Discusses development of potash undertakings in Railroad Valley].—M. & S. P., May25,1912; p. 731; 500 w; 20c.

Breger, Carpel L.—*Review of Potash in the U. S. and Abroad in* 1911.—Mining & Engg. World, Feb.3,1912; p. 297; 3000 w; 10c.

Reprinted in Amer. Fertilizer, Feb.24, p. 37; 3000 w; 25c.

Brown, F. C.—*New Zealand and Nevada Mining Methods Compared;* [Compares wages, labor conditions and details of mining and milling].—M. & S. P., Jan.13,1912, p. 104; 1800 w; 20c.

Buckley, E. R.—*Geology of the Jarbidge Mining District, Nevada.*—Mining & Engg. World, Dec.16,1911, p. 1209; 2800 w*; 10c.

Carpenter, A. H.—*Boyer Copper Deposits, Nevada.*—M. & S. P., Dec.23,1911, p. 804; 3000 w*; 20c.

Cutler, H. C.—*Como, Nevada;* [*Gold camp*].—M. & S. P., Apr.13,1912; p. 539; 1400 w*; 20c.

Dietz, Dr.—*Die hohen Temperaturen auf dem Comstock Lode und ihre Einwirkung auf die Bergleute;* [High temperatures in the Comstock Lode and their effect on miners; from Monogr. of U. S. Geol. Survey, No. 4].—Kohle & Erz, May6,1912; p. 458; 4000 w; 35c.

Eddy, C. E.—*Reminiscences of Stampede for Gold in Nevada Boom.*—Mines & Methods, April,1912; p. 458; 3600 w; 25c.

Hutchinson, J. W.—*Operating Costs at the Goldfield Consol. Mill, Nev.*—M. & S. P., Jan.20,1912, p. 137-140*; 1000 w; charts; 20c.

Kerr, M. B.—*Mines of the Southern Sierras of California and Nevada;* [Review of gold resources].—M. & S. P., Jan.6,1912, p. 34; 1800 w*; 35c.

Kidder, S. J.—*Operating Costs at the Pittsburgh-Silver Peak Mill;* [Blair, Nevada].—M. & S. P., Feb.10,1912; p. 239-242; charts; 20c.

Knapp, J. G.—*Promising Condition in Bullion Mining District, Nev.*—Salt Lake Mng. Rev., Feb.15,1912; p. 11; 1600 w*; 25c.

Locke, Aug.—*Geology of the Tonopah Mining District.*—Amer. Inst. Mng. Engrs., Trans. for October, 1911; 3000 w*; $1.15.
Abstract in M. & S. P., Oct.21,1911, p. 523; 2500 w*; 20c. Also in Mining & Engg. World, Dec.23, p. 1271; 2700 w*; 10c. Also in Mng. Sci., March28, p. 286; 2800 w*; 20c.

Martin, Al. H.—*Mining and Milling Costs in the Goldfield District.*—Mining & Engg. World, June8,1912; p. 1241; 2100 w*; 10c.

Martin, Al. H.—*Mason Valley Mines and Smelting Works, Nevada.*—Mines & Methods, April,1912; p. 447; 1700 w*; 25c.

Martin, A. H.—*Heavy Stamps Find Favor at Nevada Mills.*—Mining & Engg. World, March30,1912; p. 703; 1800 w*; 10c.

Martin, A. H.—*Present Status of Manhattan District, Nevada.*—Mng. Sci., March 14,1912, p. 248; 1600 w*; 20c.

McCormac, T.—*Shaft Sinking Costs at Pioche.*—M. & S. P., May4,1912; p. 632; 800 w; 20c.

Phalen, W. C.—*Potash Salts; Summary for 1911;* [Reviews potash, alunite, leucite and silicate, kelp, etc., developments in U. S.].—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 31 pp.; 10c.

Rogers, A. F.—*Occurrence and Origin of Gypsum and Anhydrite at the Ludwig Mine, Lyon County, Nevada;* [Copper mine].—Econ. Geol'y, Feb.-March,1912; pp. 185-189; 65c.

Rogers, A. F.—*Orthoclase-Bearing Veins from Rawhide, Nev., and Weehawken, N. J.*—Econ. Geol'y, Dec.,1911, p. 790-798*; 65c.

Sanderson, H. H.—*The Giroux Mine Fire.*—Mines & Minerals, Feb.,1912; p. 435; 2000 w*; 35c.

Schrader, F. C.—*A Reconnaissance of the Jarbidge, Contact and Elk Mountain Mining Districts, Elko County, Nev.*—U. S. Geol. Survey, Bull. 497; 162 pp*; 10c.
Abstract on Jarbidge District; in Mng. Sci., Apr.25,1912, p. 366; May2, p. 387; 5000 w*; 30c. Also in E. & M. J., May 4, p. 890; 1100 w; 25c. Also in Los Angeles Mng. Rev., May4, p. 7; 2500 w; 20c.
Abstract on Contact District in Mining & Engg. World, May4, p. 955; 2100 w*; 10c. Also in Mng. Sci., July4, p. 559; 1500 w; 20c.

Scott, W. A.—*The Nevada Hills Mill, Fairview, Nev.*—M. & S. P., Jan.20,1912, p. 343; 1000 w*; 20c.

Sheldon, G. L.—*Mining and Milling at the Nevada Consolidated.*—Mex. Mng. Jnl., May,1912; p. 19; 1800 w*; 25c.

Shell, A. R.—*Potash near Ely, Nevada;* [Railroad Valley deposits].—Mng. Sci., Apr.11,1912; p. 333; 1000 w; 20c.

Stines, N. C.—*Geology of High Grade District, Cal.*—Mng. Investor, May6,1912; p. 192; 1600 w; 25c.

Stoneham, W. J.—*Review of Mining in the U. S. in* 1911; *Nevada;* [Gold, silver, zinc, lead, copper].—Mining & Engg. World, Jan.27,1912; p. 227; 4200 w; 25c.

Weed, W. H.—*Brief Notes on the Geology of the Ely District, Nevada.*—Mining & Engg. World, June8,1912; p. 1198; 750 w; 10c.

White, D.—*Zinc Mines of Southern Nevada;* [Read to Goldfield meeting, Amer. Mng. Congr.].—Mines & Minerals, June, 1912; p. 671; 4500 w; 35c.

Wooley, R. E.—*Description of the Ohara Mine;* [Blackhorse district, White Pine county].—Salt Lake Mng. Rev., Jan.30, 1912; p. 20; 750 w*; 25c.

Yeatman, P.—*Work of the Nevada Cons. Copper Co.;* [Report for 1911].—M. & S. P., May4,1912; p. 627; 2200 w; 20c.

Young, Geo. J.—*The Position on the Comstock;* [Reviews recent mining and milling treatment and costs].—E. & M. J., Jan.20,1912, p. 167; 4500 w*; 25c.

Zalinski, E. R.—*Notes on Pioche, Nevada.*—E. & M. J., March23,1912; p. 604; 1500 w; 25c.

———. *Goldfield, Nevada, Cyanide Mill.*—Mines & Minerals, May,1912; p. 610; 1300 w*; 35c.

———. *Mason Valley Smeltery, Nevada.*—E. & M. J., Feb.24,1912; p. 410; 600 w*; 25c.

———. *Mining in Nevada in* 1911; [Gold, silver, lead, zinc, copper].—E. & M. J., Jan. 6,1912, p. 67; 3000 w; 25c.

———. *Nevada Potash Laboratory;* [Bureau of Soils-Geol. Survey laboratory at Reno].—Amer. Fertilizer, March23,1912; p. 35; 1400 w; 25c.

———. *Porcupine vs. Goldfield;* [Compares development of companies].—Industrial Advocate, Feb.,1912; p. 9; 3000 w; 45c.

———. *Porphyry Coppers and Ore Reserves;* [Compares Utah, Ray, Chino and Nevada].—M. & S. P., May11,1912; p. 653; 1200 w; 20c.

———. *Reduction Plants of Nevada;* [List of, with capacity; from Goldfield "News"].—Salt Lake Mng. Rev., Jan.15, 1912, p. 27; 1000 w; tables; 25c. Also in Mining & Engg. World, Feb.17,1912; p. 408; 500 w; tables; 10c.

———. *Report of the Tonopah-Belmont Development Co.;* [Includes new flow-sheet of Belmont mill, March1,1912].—M. & S. P., May4,1912; p. 624; 2000 w*; 20c.

———. *Report of the Goldfield Con. Mines Co.* [For year ending Oct.31,1911].—M. & S. P., Feb.3,1912; p. 196; 3000 w; 20c.

———. *Storage Battery for Goldfield Mines, Nevada;* [Power control in isolated plants with varying load conditions].—Jnl. of El'y Power & Gas, Dec.30,1911, p. 609; 1800 w*; 35c.

———. *The New Mill of the Tonopah Belmont Co.;* [Flow sheet].—Mining & Engg. World, June15,1912; p. 1250; 100 w*; 10c.

———. *Tonopah Mines and Mining;* [History and present status; from "Tonopah Miner" special issue, May25,1912].—M. & S. P., June1,1912; p. 749; 1000 w; 20c. Also in Mng. & Oil Rev., June,1912; p. 4-8; 4000 w; 35c.

———. *Work of the Tonopah Mining Co.;* [Summary of 10th annual report for 1911].—M. & S. P., May25,1912; p. 722; 2000 w; 20c.

———. *Yerington District, Nevada.*—E. & M. J., Apr.27,1912; p. 828; June8, p. 1135; 2000 w; 40c.

NEW MEXICO

Clifford, Jas. O.—*Mining Copper Ore at Chino.*—M. & S. P., March30,1912; p. 463; 1000 w*; 20c.

Curran, T. F. V.—*Vanadium; Its Ores and Uses.*—E. & M. J., June1,1912; p. 1093; 3500 w*; 25c.

Dinsmore, C.—*The Southwestern Oil Situation;* [7-Lakes district, N. Mex.; and various Arizona districts].—El Paso Mng. Jnl., March,1912; p. 8; 5000 w; 35c.

Douglas, Jas.—*Some Reflections on the Disposal of Public Coal Lands;* [Coal mining at Dawson, N. Mex., as a guide to conservation policy].—Amer. Mng. Congr., 1911; Proc., Vol. XIV; pp. 214-226. Illustrated abstract in Black Diamond, Dec.16, p. 15; 3200 w*; 30c.

Hess, F. L.—*The Production of Vanadium in* 1910.—U. S. Geol. Survey Mineral Resources f. 1910; 1911; 2000 w; 10c.

1911 *Operations.*—Mining & Engg. World, Apr.27,1912; p. 902; 750 w; 10c.

Jackling, D. C.—*Chino Copper Co.; Review of* 1911 *Operations.*—Mining & Engg. World, Apr.27,1912; p. 902; 750 w; 10c. Also in M. & S. P., May25, p. 725; 2400 w*; 20c.

Liston, J.—*Electric Power in Eastern Iron Ore Mines;* [Mineville].—Iron Trade Rev., March21,1912; p. 649; 3200 w*; 20c.

Pickard, B. O.—*The Oro Grande District in Grant County, New Mexico.*—Mng. Sci., Feb.15,1912; p. 166; 3200 w*; 20c.

Reagan, A. B.—*Mineral Resources of Jemez-Albuquerque Region, N. Mex.;* [Coal; also copper and gold].—Mining & Engg. World, Jan.6,1912; p. 23; 1000 w; 10c.

Sully, J. M.—*Milling the Ore of the Chino Mine.*—M. & S. P., March30,1912; p. 464; 3000 w*; 20c.

Walter, P. A. F.—*Review of Mining in the U. S. in* 1911; *New Mexico* [Gold, silver, copper, lead, zinc].—Mining & Engg. World, Jan.27,1912; p. 250; 2000 w; 25c.

———. *New Mexico;* [Brief notes on developments in 1911].—M. & S. P., Jan.6, 1912, p. 87; 300 w; 35c.

———. *New Mexico in* 1911.—E. & M. J., Jan.6,1912, p. 61; 750 w; 25c.

———. *Porphyry Coppers and Ore Reserves;* [Compares Utah, Ray, Chino, and Nevada].—M. & S. P., May11,1912; p. 653; 1200w; 20c.

———. *The Mora Mica Deposits of New Mexico.*—Mining & Engg. World, May4, 1912; p. 950; 1200 w; 10c.

———. *The Chino Copper Co.;* [Ores, geology, mining and treatment].—Mines & Minerals, June,1912; p. 668; 2500 w*; 35c.

———. *The Savanna Copper Co.*—El Paso Mng. Jnl., May,1912; p. 14; 1200 w; 35c.

NEW YORK

Diller, J. S.—*The Production of Talc and Soapstone in* 1911.—U. S. Geol. Survey, Mineral Resources f. 1911; 9 pp.; 20c.

Hahn, F. F.—*The Form of Salt Deposits.*—Econ. Geol'y, Feb.-March,1912; pp. 120-135*; 65c.

Newland, D. H. — *Adirondack Gold Schemes.*—E. & M. J., Feb.24,1912; p. 392; 750 w; 25c.

Rogers, G. S.—*The Geology of the Cortland Series and its Emery Deposits.*—N. Y. Acad. Sci., Annals; Vol. 21, 1911; pp. 11-86; $3. Brief abstract in Jnl. of Geol'y, Apr.-May, 1912; p. 278; 150 w; 65c.

Smith, C. H.—*The Clinton Type of Iron-Ore Deposits.*—"Types of Ore Deposits," by H. F. Bain, and others; 1911; pp. 33-52.

NORTH CAROLINA

Hess, F. L.—*Rare Minerals of the South;* [Resources of southern states in monazite, zircon, yttrium, rutile, tin].—Manffrs. Record, Feb.22,1912; p. 72; 5000 w; 65c.

Pratt, J. H. and H. M. Berry.—*The Mining Industry in North Carolina During* 1908, 1909 *and* 1910; [Copper, mica, monazite; also gold, silver, iron, tin, flint, barite, zircon, talc, gems (beryl, thulite, amethyst, garnet), mineral waters, graphite, coal, peat, stone, sand-lime brick, clay].—N. Car. Geol. Survey, Economic Paper No. 23; 1911; 134 pp*; $1.

Sterrett, D. B.—*The Production of Mica in* 1911.—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 9 pp.; 10c.

Sterrett, D. B.—*The Production of Monazite and Zircon in* 1911; [U. S. production and imports; bibliography].—U. S. Geol. Surv., Mineral Resources f. 1911; 1912; 6 pp; 20c.

Stone, R. W.—*Coal on Dan River, N. Car.*—U. S. Geol. Survey, Bull. 471-B; 1912; pp. 35*; 20c.

U. S. Geol. Survey, Hydrographic Division.—*Water Powers of North Carolina.*—N. Car. Geol., etc., Survey, Bull. 20, 1911; 383 pp*; $1.

———. *Mineral Production in North Carolina,* 1908-1909-1910; [from state survey bulletin; gold, silver, copper, iron, garnet, mica, gems, rare earths, mineral waters, stone, etc.].—Mining & Engg. World, Dec.23,1911, p. 1273; 500 w; table; 10c.

NORTH DAKOTA.

Bliss, J. A.—*North Dakota Lignite in* 1911.—Coal Age, Jan.6,1912, p. 408; 500 w; 20c.

OHIO.

George, H. C.—*Lima Oilfield.* See Indiana.

Harrison, J.—*The Ohio Coal Industry for* 1911.—Coal Age, Jan.6,1912, p. 410; 1200 w; 20c.

Hibbs, Wm.—*Mining the No.* 8 *Seam in Ohio;* [Practice on Pittsburgh seam].—Coal Age, May18,1912; p. 1036; 1500 w*; 20c.

Hyde, J. E.—*Occurrence of Coal Which Bears Evidence of Unusual Conditions Accompanying its Deposition;* [Erosion of coal before deposition of cap sandstone, at B. & O. R. R. cut, Somerset, Ohio].—Jnl. of Geol'y, May-June,1912; p. 316; 5500 w*; 65c.

Saliers, E. A.—*The Coal Miner;* [Studies on wage regulation in Hocking Valley].—Bethlehem, Penn., 1912; pp. —; (Pamphlet).

Zenker, L.—*Die Tonwarenindustrie in Ohio;* [Clay mining and clay-products industries in Ohio].—Ton-Industrie Ztg., Jan. 23,1912; p. 123; 750 w; 25c.

———. *Big Gas Wells in Ohio;* [Record *of production in* 1911].—Natural Gas Jnl., Feb.,1912; p. 52; 53; 1500 w; 35c.

———. *Cleveland's Big Wells.*—Nat. Gas Jnl., June,1912; p. 253; 500 w; 35c.

———. *New Mill;* [Kelly Plaster Co., Castalia, Ohio].—Rock Products, Apr.,1912; p. 47; 1000 w; 30c.

OKLAHOMA

For "Joplin district," see Missouri.

Bigham, Geo. W.—*Oklahoma Lead and Zinc Mining in* 1911.—E. & M. J., Jan.6, 1912, p. 23; 500 w; 25c.

Boyle, Ed.—*The Coal Industry of Oklahoma,* 1911.—Coal Age, Jan.6,1912, p. 411; 750 w; 20c.

Butler and Dunlop.—*Metal Production in the Central States,* 1911.—See under Michigan.

Chapman, T.—*The Miami Zinc-Lead District, Oklahoma.*—E. & M. J., June8,1912; p. 1146; 1500 w*; 25c.

Day, David T.—*The Production of Petroleum in* 1910.—U. S. Geol. Survey, Mineral Resources f. 1910; 1911; 136 pp; 10c.

Fursman, W. H.—*Explosion at Sans Bois Mine No.* 2; [McCurtain, Okla., 74 dead].—Coal Age, Apr.13,1912; p. 868; 2000 w*; 20c.

Garcia, J. A.—*The Dewar, Okla., Coal Field.*—Coal Age, Apr.20,1912; p. 898; 1800 w*; 20c.

Haworth, E.—*Oil and Gas in Mid-Continental Field;* [Review of progress in 1911].—E. & M. J., Jan.6,1912, p. 95; 1500 w; 25c.

Plumb, C. H.—*The Miami, Oklahoma, Mining Camp.*—Mines & Minerals, May, 1912; p. 627; 1000 w*; 35c.

Snider, L. C.—*Review of Mining in the U. S. in* 1911; *Oklahoma* [Lead, zinc, coal].—Mining & Engg. World, Jan.27,1912; p. 231; 3600 w; 25c.

Snider, L. C.—*Oklahoma Lead and Zinc Fields.*—E. & M. J., Dec.23,1911, p. 1228; 3600 w*; 25c.

Steel, A. A.—*Mine Explosion at McCurtain, Oklahoma;* [Sans Bois colliery No. 2, Haskell county].—Mines & Minerals, May, 1912; p. 587; 5000 w*; 35c.

Also described in Coal Age, March30, 1912; p. 812; 1200 w*; 20c.

"A Smelter."—*Zinc Smelting in Kansas and Oklahoma.*—E. & M. J., Apr.27,1912; p. 849; 3200 w; 25c.

OREGON.

Burns, F.—*The Crater National Forest; Its Resources and Their Conservation.*—U. S. Forest Service, Bull. 100; 1911; 20 pp*; 10c.

Clements, C. H.—*Southern Oregon Mines Prosperous;* [Review for 1911].—Oreg. Mng. & Timber Jnl., Dec.,1911, p. 7; 1500 w; 35c.

Haley, C. S.—*Elevating 10-ct. Gravel at a Profit;* [Elevator system of hydraulic gold mining in California and Oregon].—M. & S. P., Apr.13,1912; p. 530; 3600 w*; 20c.

Harris, A. H.—*Saving the Gold in Beach Sand;* [Scraper and concentrator for use in Oregon].—M. & S. P., March20,1912; p. 505; 500 w*; 20c.

Mace, C. H.—*Rogue River Gravel Beds.*—M. & S. P., March23,1912; p. 435; 1200 w*; 20c.

Mahone, L. D.—*Mineral Resources of Oregon;* [Platinum, gas, coal, gold, tin, quicksilver, lime, lead, sand, tungsten, tellurium, iron, asbestos, oil, maganese, zinc, copper].—Oregon Mng. & Timber Jnl., Dec.,1911, p. 3; 1200 w; 35c.

Mahone, L. D.—*Natural Resources of Baker County, Oregon.*—Oregon Mng. & Timber Jnl., Jan.,1912; p. 7; 2500 w*; 25c.

Parks, H. M.—*The Economic Geological Resources of Oregon;* [Coal, oil and gas, stone, lime, cement, gypsum, clays, mineral waters, gold, silver, copper, lead, etc.].—Oreg. Bur. Mines, Bull. Ser. 5, No. 2; 1912; 115 pp*; 50c.

Parks, H. M.—*Road Materials in the Willamette Valley.*—Oregon State Bur. Mines, Bull. No. 1; 1912 (2d edition); 64 pp*; 50c.

Patterson, C. W.—*Mining Resources of Oregon.*—Los Angeles Mng. Rev., March16, 1912, p. 9; 1000 w; 20c.

Platts, J. B.—*Occurrence of Gold "Pockets" in Josephine County.*—Mining & Engg. World, Apr.27,1912; p. 909; 1000 w; 10c.

Scofield, F. W.:—*Mining in Oregon in* 1911.—E. & M. J., Jan.6,1912, p. 62; 1000 w; 25c.

Stovall, D. H.—*Mining Activities in Baker County, Oregon, in 1911.*—Mining & Engg. World, Feb.17,1912; p. 405; 2500 w; 10c.

Stovall, D. H.—*Mining in Grant County, Oregon, in 1911.*—Mining & Engg. World, March16,1912; p. 611; 1500 w; 10c.

Stovall, D. H.—*Review of Mining in the U. S. in* 1911; *Oregon.*—Mining & Engg. World, Jan.27,1912; p. 233; 2400 w; 25c.

Stovall, D. H.—*Bridging Chasms with Pipe Lines;* [Suspended sluice in southern Oregon].—Mng. Sci., Jan.4,1912, p. 7; 1000 w*; 20c.

Warner, G. G.—*Bohemia District Looms Up.*—Oregon Mng. & Timber Jnl., Dec.,1911, p. 6; 500 w; 35c.

———. *Big Areas in Jackson County Underlain with Coal.*—Oregon Mng. & Timber Jnl., Dec.,1911, p. 4; 500 w; 35c.

———. *Eastern Oregon.*—M. & S. P., Jan.6,1912, p. 81; 400 w; 35c.

———. *Placer Mines of Oscar Creek;* [Josephine county].—Oregon Mng. & Timber Jnl., March,1912; p. 31; 500 w*; 25c.

PENNSYLVANIA

Bayley, W. S.—*Peculiar Hematite Ore on the Tract of the Durham Mine, Bucks County, Penn.*—Econ. Geol'y, Feb.-March,1912; pp. 179-184; 65c.

Bell, W. T.—*Famous Natural Gas Fields;* [Question of exhaustion and deeper gas sands in Appalachian fields].—Petroleum World, Dec.,1911, p. 30; 750 w; 35c.

Boileau, J. W.—*Early Exhaustion of Connellsville Coking Coals Forecasted;* [From Connellsville, Pa., "Courier"].—Coal & Coke Op., June6,1912; p. 363; 800 w; 25c. Also in Coal Age, July20; p. 80; 1000 w*; 20c.

Burrell, G. A.—*Characteristics of the Natural Gas Used at Pittsburgh;* [For artificial explosions in government experimental gallery; with notes on analytic methods].—U. S. Bur. Mines, Bull. No. 15; 1912; pp. 63-77; 10c.

Brady, F. W.—*The Carbondale Mine Fire.*—Mines & Minerals, Jan.,1912; p. 340; 1200 w; 35c.

Cartlidge, O.—*Mine No.* 3, *Saline County Coal Co.*—Mines & Minerals, Feb.,1912; p. 387; 2000 w*; 35c.

Cole, E. L.—*The New Buck Mountain Breaker;* [of Lehigh Valley Coal Co., Mahanoy City, Pa.].—Coal Age, May18,1912; p. 1032; May25, p. 1067; 5000 w*; 30c. Also described in Mines & Minerals, June, 1912; p. 637; 3600 w*; 35c.

Coons, A. T.—*The Production of Slate in* 1911.—U. S. Geol. Surv., Mineral Resources f. 1911; 1912; 19 pp.; 10c.

Dudley, C. B.—*Coal Mine Waste and Water Pollution;* [Effects in Lackawanna river].—Water, Vol. 14, No. 159; pp. 60-62; 75c.

Eaton, H. N.—*Geology of South Mountain at the Junction of Berks, Lebanon and Lancaster Counties.*—Jnl. of Geol'y, May-June,1912; pp. 331-343*; 65c.

Eyerman, J.—*The Mineralogy of Pennsylvania. Part* 2: *Chemical Analyses.*—Easton, Penn., 1911; 25 pp.; (pamphlet).

Geralia, P.—*Anthracite Miners Accept Proposed Agreement;* [Solution of 1912 an-

thracite miners' controversy].—Black Diamond, May25,1912; p. 15; 5000 w; 30c.

Goodin, B. J.—*Coke Resources of the Pittsburgh District;* [Read to Foundrym. Asso., Pittsburgh].—Iron Trade Rev., Dec. 14,1911, p. 1051; 2200 w; 20c. Also in Coal & Coke Op., Dec.7, p. 364; Dec.14, p. 382; 2700 w; 30c. Also in Coal Trade Bull., Jan.15,1912, p. 35; 2100 w; 25c.

Griffith, Wm., and E. T. Conner.—*Mining Conditions under the City of Scranton, Pa.* —U. S. Bur. Mines, Bull. 25; 1912; 89 pp.; atlas of plates; 20c.

Hall, R. D.—*The Jamison Coke Plants, Greensburg, Pa.*—Coal Age, Apr.27,1912; p. 936; 2000 w*; 20c.

Hartmann, W. E.—*By-Product Coking in the Pittsburgh District;* [from Engrs. Soc. of W. Penn., Proc., May,1912].—Coal & Coke Op., May30, p. 346; Aug.1, p. 68; 5000 w; 35c. Also in Coal Age, Aug.3, p. 151; 3500 w; 20c.

Hoffman, F. L.—*Accidents in Anthracite Coal Mines;* [Mortuary and non-fatal statistics in Penna.].—Coal Age, Apr.27,1912; p. 940-943; tables; 20c.

Johnston, J. K.—*Characteristics of the Thick-Vein Freeport Coal;* [Read to Coal Mng. Inst. of America; abstract].—Coal & Coke Op., Jan.11,1912, p. 20; 2000 w; 25c. Also in Coal Trade Bull., Feb.1, p. 37; 2400 w; 25c.

Lauck, W. J.—*Efficiency of the Bituminous Coal Mine Employe;* [in Pennsylvania, chiefly].—Mining & Engg. World, Jan.20, 1912; p. 117; 2700 w; 10c. Abstract in Coal Trade Bull., Feb.1, p. 43; 2700 w; 25c.

Luty, B. E. V.—*The Pittsburgh District in* 1911; [Coal review].—Coal Age, Jan.6,1912, p. 413; 750 w; 20c.

Meurer, —. *Das Naturgas, seine Gewinnung und Verwertung im Industriegebiet von Pittsburgh, Pennsylvanien;* [Natural gas, its production and uses in the Pittsburgh district].—Jnl. f. Gasbeleuchtung, Feb.24,1912; pp. 180-187*; 50c.

National Tube Co.—*Map of the Pittsburgh District Showing Railroad Terminals and Location of 232 Iron and Steel Works; Jan.* 1, 1912.—Iron Trade Rev., March28, 1912; insert; 20c.

Roberts, T. P.—*Acids in the Monongahela River;* [Drainage of Pittsburgh coal mines and mills; read to Engrs. Soc. of W. Penn..—Engg. Record, Dec.23,1911, p. 729; 1500 w; 25c.

Roderick, Jas. E.—*Report of the Dept. of Mines of Pennsylvania,* 1910; *Vol. I, Anthracite; Vol. II, Bituminous.*—Harrisburg, Penn; 1911; pp. 608, 983; $1.00.

Ruggles, W. B.—*The Plant of the Crescent Portland Cement Co.;* [Wampum].—Cement Age, Dec.,1911, p. 264; 2000 w*; 25c.

In French in Rev. d. Matériaux; May, 1912; p. 49; 2400 w*; 65c.

Snyder, H. P.—*Connellsville Coke Production for the Year* 1911.—Coal Trade Bull., Jan.2,1912, p. 26; 500 w; tables; 25c. Also in Iron Trade Rev., Jan.4, p. 127; 1000 w; tables; 65c. Also in Coal & Coke Op., Jan. 18,1912, p. 42; 500 w; table; 25c.

Thomas, K.—*Low Grade Ore;* [Proposed working of Martic property near Lancaster, Pa., with iron of less than 20 per cent grade].—Iron Trade Rev., June6, 1912; p. 1246; 1000 w; 20c.

Walker, M. A.—*Taylor Breaker Near Scranton, Penn.*—Coal Age, Dec.23,1911, p. 334; 1200 w*; 20c.

Wherry, E. T.—*New Occurrence of Carnotite;* [As coating on conglomerate pebbles, Mt. Pisgah, Mauch Chunk, Pennsylvania].—Amer. Jnl. of Sci., June,1912; pp. 574-580; 65c.

Wilson, E. B.—*The Cornwall, Penn., Magnetite Deposits* [and mining methods].—Lake Superior Mng. Inst., Proc., 1911; pp. 227-238*.

F. J. R.—*Iron Ore in Fulton County, Penn.*—Mines & Minerals, May,1912; p. 594; 650 w; 35c.

———. *A New Iron-Ore Deposit in Pennsylvania?* [Supposed Fulton county area].—E. & M. J., March30,1912; p. 632; Apr.6, p. 683; 2500 w; 40c.

———. *Anthracite Coal Freights;* [From editorial discussion in "Scranton Times"].—Coal Age, Apr.27,1912; p. 946; 2000 w; tables; 20c.

———. *Bituminous Mines, Pennsylvania,* 1911; [Review of production].—Coal Age, Jan.6,1912, p. 412; 2100 w; 20c.

———. *Central Pennsylvania Wage Agreement.*—Coal Trade Bull., May1,1912; p. 23; p. 54; 2500 w; 25c.

———. *Immense Power Plant Projected in Lehigh Valley;* [Proposed Hauto plant, hydro-electric with coal auxiliary at mine mouth].—Mining & Engg. World, Jan.20. 1912; p. 115; 400 w; 10c. Also in Coal & Coke Op., May16,1912; p. 307; 1000 w; 25c. Also in E. & M. J., May18, p. 992; 800 w; 25c. Also in Coal Age, June29, p. 1248; 1000 w; 20c. Also in Power, July23, p. 113; 800 w; 15c.

———. *Low Prices and Decreased Production of Coke;* [Review of Connellsville industry, 1911].—Iron Trade Rev., Jan.4, 1912; p. 127; 1000 w; table; 65c.

———. *Electrical Equipment, D. L. & W. Mines.*—Coal Age, March16,1912, p. 742; 2100 w*; 20c. Also in Coal & Coke Op., March21, p. 190; 2100 w*; 20c.

———. *Pennsylvania Coal Production During* 1911, *by Districts.*—Coal Trade Bull., March1,1912; p. 42; March15, p. 34; p. 36; April1, p. 30; 5000 w; tables; 50c.

———. *Scale of Wages in Connellsville Coke Region,* 1894-1912; [From Connellsville "Courier"].—Iron Age, Jan.25,1912; p. 259; 200 w; tables; 30c.

———. *The Selection of State Mine Inspectors;* [Opposes political election].—Mines & Minerals, June,1912; p. 634; 1200 w; 35c.

RHODE ISLAND.

Lahee, F. H.—*Relations of the Degree of Metamorphism to Geological Structure and to Acid Igneous Intrusions in the Narragansett Basin, Rhode Island.*—Amer. Jnl. of Sci., March,1912; pp. 249-262*; April, pp. 354-372*; $1.15.

SOUTH CAROLINA

———. *Nitrates from the Air;* [Plant of Southern Electrochemical Co., at Nitrolee, S. Car., for lime nitrate].—Mnfrrs. Record, Feb.8,1912, p. 47; 750 w*; 25c. Also in Amer. Fertilizer, Feb.24,1912; p. 45; 750 w*; 25c.

SOUTH DAKOTA.

Alder, A.—*Tin Occurrence in the Black hills, and Methods of Analysis.*—Pahasapa, June,1912; pp. 22-27; 65c.

Anderson, A. A.—*Lithium, Its Occurrence, Uses. Determination, and Methods of Extraction.*—Pahasapa, April,1912; p. 11; 2000 w; 65c.

Anderson, A. A.—*Lithium, Its Occurrence, Uses, Determination, and Methods of Extraction.*—Pahasapa, April,1912; p. 11; 2000 w; 65c.

Reprint in Mining & Engg. World, May 18,1912; p. 1055; 2000 w; 10c. Also in Mng. Sci., May23, p. 449; 20c.

Daugherty, R. L.—*South Dakota Gold and Tin Mines;* [Review for 1911].—M. & S. P., Jan.6,1912, p. 77; 750 w; 35c.

Putnam, W. R.—*Water Power Possibilities of the Black Hills.*—Pahasapa, June, 1912; pp. 7-12*; 65c.

Quinney, E. H.—*Tungsten in the Black Hills, and Methods for its Determination;* [From S. Dak. School of Mines Quarterly].—Mng. Sci., Jan.18,1912, p. 45; 1300 w; 20c. Also in Mining & Engg. World, July13, p. 54; 1500 w; 10c.

Sharwood, W. J.—*Analyses of Some Rocks and Minerals from the Homestake Mine, Lead, S. Dak.*—Econ. Geol'y, Dec., 1911; p. 729-989*; 65c.

Simmons, J.—*Review of Mining in the U. S. in* 1911; *S. Dakota.*—Mining & Engg. World, Jan.27,1912; p. 235; 5400 w; 25c.

Stone, R. W.—*Coal Near the Black Hills, Wyoming-S. Dak.*—U. S. Geol. Survey, Bull. 499; 66 pp*; 10c.

———. *Mining in South Dakota in* 1912. —E. & M. J., Jan.6,1912, p. 65; 1200 w; 25c.

TENNESSEE

Ashley, G. H.—*Goldfields of Tennessee; Coker Creek Area;* [Abstract from "Resources of Tennessee"].—Mining & Engg. World, Oct.7,1911; p. 695; 3000 w*; 10c. Also in M. & S. P., Oct.14, p. 491; 1500 w*; 20c. Also in Mines & Minerals, Apr.,1912; p. 547; 2200 w; 35c.

Ashley, G. H.—*Bauxite Mining in the State of Tennessee;* [From "Resources of Tennessee"].—Mng. Sci., Jan.4,1912, p. 8; 1800 w*; 20c. Also in Mines & Minerals, Feb., p. 419; 2500 w*; 25c. Also in Mining & Engg. World, March9, p. 557; 1600 w*; 10c.

Barr, Jas. A.—*Tennessee Phosphate Practice;* [Prospecting, mining, treatment].—Amer. Fertilizer, June1,1912; p. 37; 5000 w; 25c.

Evans, A. W.—*Lookout Mountain Coal Measures;* [Tenn., Ala., Ga.].—Mines & Minerals, June,1912; p. 654; 2400 w*; 35c.

Glenn, L. C.—*The Growth of Our Knowledge of Tennessee Geology.*—"Resources of Tennessee," May,1912; pp. 167-219*; 50c.

Hall, R. D.—*The Briceville Mine Explosion.*—Coal Age, Dec.23,1911, p. 343; 2800 w*; 25c.

Munn, M. J.—*Explorations for Natural Gas and Oil at Memphis, Tenn.*—Resources of Tennessee, Feb.,1912; pp. 48-68*; 35c.

Nelson, W. A.—*Lignite and Lignitic Clay in West Tennessee.*—Resources of Tenn. April,1912; pp. 157-160*; 35c.

Nelson, W. A.—*Notes on Lead in Tennessee.*—Resources of Tenn., March,1912, p. 100-119*; 50c.—Abstract in Mining & Engg. World, March16, p. 603; 800 w; 10c.

Nelson, W. A.—*Sulphuric Acid Manufacture in Tennessee* [At Ducktown copper smelters].—Mng. Sci., Feb.8,1912; p. 149; 2000 w*; 20c. Reprint in Mines & Methods, Feb., p. 407*; 25c.

Phalen, W. C.—*Sulphur, Pyrite and Sulphuric Acid in* 1911; [Production in U. S., with "Notes on the Manufacture of Sulphuric Acid From Smelter Fumes at Ducktown, Tenn.," by F. B. Laney; pp. 24-30].—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 30 pp.; 20c.

Phalen, W. C.—*Bauxite and Aluminum,* 1911.—(See Arkansas.)

Shiflett, R. A.—*Annual Report of the Mining Department of Tennessee for* 1910. —Nashville, 1911; 155 pp; $1.

Smith, C. H.—*The Clinton Type of Iron-Ore Deposits.*—"Types of Ore Deposits," by H. F. Bain, and others; 1911; pp. 33-52.

Smith, R.—*Tennessee Oil Fields.*—Manfrrs. Record, Feb.29,1912; p. 55; 1500 w; 25c.

Stone, S. R.—*Phosphate Deposits and Mining Methods in the United States.*—Mining & Engg. World, March2,1912; p. 511; 1600 w; 10c.

Sylvester, G. E.—*State Mine Inspector's Report on Cresso Mountain Disaster;* [Cross Mountain mine explosion at Briceville, Dec.9,1911].—Coal & Coke Op., Apr. 25,1912; p. 257; 4200 w; 25c. Also in Coal Trade Bull., June1,1912; p. 43; 5000 w; 25c.

Waggaman, W. H.—*A Report on the Natural Phosphates of Tennessee, Kentucky and Arkansas.*—U. S., 62d Congr., 2d Session; Senate Document No. 190; pp. 49-77*. Reprinted as Bull. 81 of U. S. Bureau of Soils, March20,1912; 36 pp*.

———. *Cross Mountain Mine Explosion;* [Briceville, Tenn.].—Mining & Engg. World, Dec.16,1911, p. 1223; 2000 w; 10c. Also in Black Diamond, Dec.16, p. 17; 1200 w; 25c. Also in Coal Age, Dec.16, p. 307; Dec.23, p. 343; 4500 w*; 30c. Also in Mines & Minerals, Feb.,1912; p. 393; 5000 w*; 35c.

———. *Phosphate Rock in Tennessee;* [Review of producers, output, methods; from state report].—Amer. Fertilizer, Jan. 13,1912, p. 21; 1600 w; 25c.

TEXAS

Aston, R. G.—*Oil-Burning Locomotives on the Tehuantepec National RR., Mexico;* [Discusses difficulties overcome in burning Texas fuel oil; read to British Instn. of Mechl. Engrs., Dec.,1911; abstract].—Iron & Coal Trades Rev., Dec.22,1911, p. 1015; 841; 3000 w*; 30c. Also in Canadian Engr., May16,1912; p. 663; 3500 w; 25c.

Day, D. T.—*Vast Storehouse of Fuel in Southern Petroleum and Natural Gas.*—(See under West Virginia.)

Lucas, A. F.—*Geology of Calcasieu Mines and Sulfur-Oil Fields of the Coastal Plain;* [Address at presentation of Perkins medal to Dr. H. Frasch].—Met. & Chemi. Engg., Feb.,1912; p. 80; 2100 w; 35c. Also in Jnl. of Ind'l & Engg. Chem'y, Feb., p. 140; 2800 w; 65c. Also in Soc. of Chem'l Ind'y Jnl.; Feb.29, p. 173; 2000 w; 35c.

McLaren, Alex.—*Gold and Rare Metal Mining near Llano, Texas;* [Gold-platinum-bismuth].—Mng. Sci., May2,1912; p. 394; 300 w*; 20c. Also in Salt Lake Mng. Rev., May15, p. 11; 2000 w*; 25c.

Phenis, A.—*To Ship Ore to Philadelphia;* [Texas ores, and dock facilities at Port Bolivar].—Manfrrs. Record, Feb.8,1912; p. 49; 1000 w*; 25c.

Phillips, Wm. B.—*Iron and Steel Making in Texas;* [Review of iron-ore resources].—Iron Age, Jan.4, p. 14; Jan.11, p. 141; 6000 w; 50c.

Phillips, Wm. B.—*The Production of Fuller's Earth in Texas.*—Mining & Engg. World, Dec.16,1911, p. 1218; 600 w; 10c.

Phillips, Wm. B.—*Quicksilver in Texas in* 1911.—E. & M. J., Jan.6,1912, p. 38; 600 w; 25c.

Phillips, Wm. B.—*Petroleum in Texas;* [Review for 1911].—E. & M. J., Jan.6,1912, p. 97; 500 w; 25c.

Phillips, Wm. B.—*Coal and Lignite in Texas in* 1911.—Coal Age, Jan.6,1912, p. 414; 500 w; 20c.

Phillips, Wm. B.—*The New Iron-Ore Dock at Port Bolivar;* [Galveston Bay, Texas].—Iron Age, Apr.18,1912; p. 974; 1500 w*; 30c.

Schaller, W. T.—*The Properties of Mosesite;* [Mercury mineral from Terlingua].—U. S. Geol. Surv., Bull. 509; 1912; pp. 104-109; 10c.

Shutt, W. F.—*Utilization of Low Grade Fuels;* [Using Texas crushed-bone lignite in gas-producers].—Coal Age, May4,1912; p. 979; 750 w; 20c.

Udden, J. A.—*Oil and Gas Fields of Wichita and Clay Counties, Texas.*—Mining & Engg. World, Apr.6,1912; p. 767; 1000 w; 10c. Also described in Nat. Gas Jnl., June, p. 262; 1200 w; 35c.
German abstract in Organ d. Bohrtechniker, June15, p. 139; 900 w; 35c.

———. *Texas Iron-Ore Possibilities.*—Manfrrs. Record, Jan.18,1912; p. 49; 1000 w; 25c.

———. *Texas as an Iron Producing State.*—Manfrrs. Record, Feb.22,1912; p. 110; 4000 w*; 65c.

UTAH

Bamberger, C. G.—*Caving System at Ohio Copper Mine;* [Bingham].—E. & M. J., Apr. 6,1912; p. 701; 1800 w*; 25c.

Bixby, M.—*Gem Minerals of Utah;* [Variscite, topaz, agate, beryl, garnet, corrundum, tourmaline, amethyst, prosopite, obsidian, opal].—Salt Lake Mng. Rev., May 30,1912; p. 19; 1800 w*; 25c.

Bixby, Maynard.—*Marketing Uranium Vanadium;* [Buyers and shipping conditions for Utah ores, with notes on Temple Rock deposit].—Salt Lake Mng. Rev., May 15,1912; p. 13; p. 20; 1000 w; 25c.

Brown, L. P.—*Phosphate.*—See Idaho.

Butler, B. S., and H. S. Gale.—*An Alunite Deposit near Marysvale, Utah;* [from U. S. Geol. Survey bulletin].—Mng. Sci., Dec.21, 1911, p. 550; 1300 w; 20c. Also in Salt Lake Mng. Rev., Dec.30,1911, p. 119; Jan. 30,1912, p. 13; 4500 w*; 40c. Also in Amer. Fertilizer, Dec.30; March9, p. 39; 6000 w*; 35c. Also in M. & S. P., Feb.3, p. 210; 2500 w*; 20c. Also in Mining & Engg. World, Feb.10, p. 352; 3600 w*; 10c.
Italian abstract in Rassegna Mineraria, April1,1912; p. 194; 1000 w; 40c.

Calvert, W. H.—*Utah Coal Fields; A Magnificent Source of Natural Wealth.*—Salt Lake Mng. Rev., Apr.30,1912; p. 29; 1800 w*; 25c.

Goodrich. H. C.—*Steam Shovels and Ore Shipping at Bingham, Utah;* [Read to Utah Soc. of Engrs.; abstract].—Salt Lake Mng. Rev., Oct.30,1911, p. 18; 1800 w; 25c. Also in M. & S. P., Nov.11, p. 624; 1800 w*; 20c. Also in Mining & Engg. World, Dec.2, p. 1114; 2000 w*; 10c. Also in Los Angeles Mng. Rev., Jan.6,1912, p. 6; 1800 w*; 20c.

Holt, T. P.—*Metallurgy of Mercur Gold Ores;* [Practice at first American cyanide mill].—Mines & Minerals. Jan.,1912, p. 355; 1800 w*; 35c. Abstract in Mining & Engg. World, Feb.10, p. 359; 1200 w*; 10c.

Jackling, D. C.—*Work of the Utah Copper Co.;* [From report for 1911].—M. & S. P., May11,1912; p. 663; 4000 w*; 20c.

Kirschbraun, L.—*Asphalts; Sources of Supply and Methods of Preparation;* [Trinidad, Bermudez and Cuban asphalt; Utah gilsonite; from Westn. Soc. of Engrs., Jnl.; May,1912].—Engg. & Contractg., June12, 1912; p. 661; 4000 w; 20c.

Knight, W. C.—*The Green River, Utah, Oil Field.*—Salt Lake Mng. Rev., Feb.29, 1912; p. 11; 2400 w*; 25c.

Low, V. F. S.—*Impressions Gathered While Traveling;* [Includes notes on Garfield plant].—Australian Mng. Standd., Apr.18,1912; p. 362; Apr.25, p. —; 5000 w*; 65c.

McKay, Guy R.—*Lining a Tunnel in Swelling Rock;* [Snake Creek tunnel, Park City district, Utah].—Engg. Record, May25, 1912; p. 564; 2700 w*; 20c.

Palmer, L. A.—*Mining in the Tintic District, Utah;* [Godiva-Sioux zone; mining and milling practice; silver-lead].—Mines & Minerals, Jan.,1912; p. 375; 4000 w*; 35c.

Palmer, L. A.—*Mining on the East Side of the Tintic District.*—Salt Lake Mng. Rev., Apr.15,1912; p. 11; 3200 w*; 25c.

Pettit, J. E.—*Utah Statistics for* 1911; [Coal production].—Coal Age, Jan.6,1912, p. 414; 500 w; 20c.

Phalen, W. C.—*Potash Salts; Summary for 1911;* [Reviews potash, alunite, leucite and silicate, kelp, etc., developments in U. S.].—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 31 pp.; 10c.

Pulsifer, H. B.—*The Metallurgy of Lead;* [General review with special reference to Utah].—Salt Lake Mng. Rev., Dec.30,1911, p. 15; 1800 w*; 25c.

Schaller, W. T.—*Crystallized Variscite From Utah.*—U. S. Nat. Museum. Proc. No. 1867; Vol. 41; pp. 413-430; Jan.31,1912; 50c.
Also in German in Zts. f. Krystallogr., Apr.,1912, pp. 321-341*; 75c.

Schaller, W. T.—*Some Minerals from Beaver County, Utah.*—U. S. Geol. Survey, Bull. 509; 1912; pp. 77-82; 10c.
Also in German in Zts. f. Krystallogr., Jan.,1912; pp. 114-119*; 75c.

Scott, W. A.—*Utah;* [Review of leading copper and silver-lead districts. 1911].—M. & S. P., Jan. 6, 1912, p. 86; 2000 w; 35c.

Shubart, B.—*The Consolidated Fuel Co. of Utah;* [Coal field south of Price].—Coal Age, Apr.27,1912; p. 944; 1500 w*; 20c.

Steele, H.—*Utah Copper Costs in "Lake Superior Figures."*—E. & M. J., May11,1912; p. 925; p. 921; 2500 w; 25c. Abstract in Mines & Methods, May,1912; p. 472; 2000 w; 20c.

Tovote, W. L.—*Types of Porphyry Copper Deposits.*—See under Arizona.

Walker, H. G.—*Black Canyon District;* [Recent developments].—Salt Lake Mng. Rev., May30,1912; p. 20; 1000 w; 25c.

Weeks, F. B.—*Phosphate,* 1911. See Idaho.

Woodruff, E. G.—*Geology of the San Juan Oil Field, Utah.*—U. S. Geol. Survey, Bull. 471-A; 1911; pp. 72-100*; 10c.

Woodruff, E. G.—*Marsh Gas Along Grand River near Moab, Utah.*—U. S. Geol. Surv., Bull. 471-A; 1911; pp. 101; 300 w; 10c. Abstract in Mining & Engg. World, June22, 1912; p. 1305; 1200 w*; 10c.

Zalinski, E. R.—*Mining in Utah in* 1911; [Copper, silver, lead, gold, zinc].—E. & M. J., Jan.6,1912, p. 71; 2800 w; 25c.

Zehring, W. S.—*Review of Mining in the U. S. in* 1911; *Utah;* [Copper, silver, lead, zinc, gold].—Mining & Engg. World, Jan. 27,1912; p. 237; 6000 w; 25c.

———. *Coal Land Development in Southern Utah.*—Coal Age, June8,1912; p. 1143; 600 w; 20c.

———. *Development of the Green River Oil Fields;* [eastern or Klondike section].—Salt Lake Mng. Rev., May30,1912; p. 11; 2700 w*; 25c.

———. *East Tintic Claim Decision;* General Land Office ruling requiring strict discovery of mineral of present or prospective value on mining claim].—E. & M. J., June15,1912; p. 1167; p. 1163; 3000 w; 25c.

———. *Great Mill of Modern Design;* [Ogden Co. cement plant; Brigham, Utah].—Rock Products, Jan.,1912; p. 34; 1200 w*; 30c.

———. *Green River Carnotite;* [Utah].—Salt Lake Mng. Rev., May30,1912; p. 14; 1200 w*; 25c.

———. *Henry Mountain Lode and Placer Gold;* [White Canyon district, Garfield county, Utah].—Salt Lake Mng. Rev., Jan.15,1912, p. 11; 2200 w*; 25c.

———. *Improved Conditions in San Juan Oil Field.*—Salt Lake Mng. Rev., Dec. 30,1911, p. 11; 2400 w*; 25c.

———. *New Railroads for Eastern Utah Coal Field.*—Salt Lake Mng. Rev., March 15,1912; p. 16; 1000 w*; 25c.

———. *Porphyry Coppers and Ore Reserves;* [Compares Utah, Ray, Chino and Nevada].—M. & S. P., May11,1912; p. 653; 1200 w; 20c.

———. *Smelter Charges in Utah;* [On Tintic and Park City silver-lead ores].—M. & S. P., Jan.20,1912, p. 145; 500 w; 20c.

———. *The International Smelter, Tooele, Utah.*—M. & S. P., March9,1912, p. 371; 1100 w*; 20c.

———. *Vanadium Deposit Found in Southeastern Utah;* [Near Cisco, 60 miles west of Grand Junction, Colo.].—Mng. Investor, June3,1912; p. 42; 500 w; 25c.

VERMONT

Coons, A. T.—*The Production of Slate in* 1911.—U. S. Geol. Surv., Mineral Resources f. 1911; 1912; 19 pp.; 10c.

VIRGINIA.

Clark, Wm. B. and B. Miller.—*Physiography and Geology of the Coastal Plain Province of Virginia;* [Economic geology by T. L. Watson; clays, marl, cement, peat, ocher, iron].—Va. Geol. Survey, Bull. 4; 1912; 274 pp*; $1 (book).

Dixon, Chas.—*Limonite Prospecting and Mining* [Open-cut mining in Virginia].—Mines & Minerals, March1912, p. 483; 2200 w*; 35c.

Dixon, Chas.—*Brown Hematite Mining in Virginia;* [Underground methods at Low Moor mines].—Mines & Minerals, Apr.,1912; p. 553; 1200 w*; 35c.

Diller, J. S.—*The Production of Talc and Soapstone in* 1911.—U. S. Geol. Survey, Mineral Resources f. 1911; 9 pp.; 20c.

Schaller, W. T.—*Crystallized Turquoise from Virginia;* [near Lynch, Campbell county].—Amer. Jnl. of Sci., Jan.,1912; p. 35; 2000 w*; 65c. Reprint in U. S. Geol. Survey Bull. 509; 1912; pp. 42-47; 10c.

Also in German in Zts. f. Krystallogr., Jan.,1912, pp. 120-125*; 75c.

Watson, T. L., and F. L. Hess.—*Zirconiferous Sandstone near Ashland, Va.*—U. S. Geol. Surv., Bull. 530, Part 1; 9 pp; 10c.

Watson, T.—*Talc and Soapstone Resources of Virginia;* [From Bull. 6, Va. Geol. Surv.].—Mining & Engg. World, Apr. 20,1912; p. 860; 1500 w; 10c.

———. *Coal Production,* 1911, *Virginia and West Virginia*—Coal Age, Jan.6,1912, p. 415; 200 w; 20c.

———. *Water Power for Coal Mines;* [Hydro-electric project of Appalachian Power Co., Va. and W. Va.].—Manfrrs. Record, Feb.22,1912; p. 96; 3000 w*; 85c.

WASHINGTON.

Bancroft, H.—*A Nickel Deposit in the San Poil Mining District, Washington.*—M. & S. P., Jan.20,1912, p. 144; 1800 w; 20c.

Daniels, Jos.—*The Roslyn, Washington, Coal Field.*—Coal Age, May25,1912; p. 1064; June8, p. 1130; 4900 w*; 30c.

Daniels, Jos.—*Combined Gravity Plane and Hoist;* [Roslyn coal field].—Coal Age, Apr.6,1912; p. 843; 500 w*; 20c.

Darras, M.—*Méthode d'exploitation des carrières de pierres à ciment;* [Glory-hole method of limestone quarrying at plant of Washington Portland Cement Co., state of Wash.].—Rev. de Matériaux, Feb.,1912; p. 20; 2000 w; 65c.

Malloy, W. G.—*Tanum Coal Co.;* [Discusses lands in Roslyn field].—Black Diamond, May25,1912; p. 22, p. 32; 500 w; 30c.

Marshall, R. B.—*Retracement of the Boundary Line Between Idaho and Washington.*—U. S. Geol. Survey. Bull. 466; 1911; 39 pp.*; 10c.

Setchell, W. A.; G. B. Rigg; F. M. McFarland; J. W. Turrentine and others.—*The Kelps of the Coast of the United States;* [and technology of sea-weed industry, especially for potash; bibliographies].—U. S., 62d Congr., 2d Session; Senate Doc. No. 190; 1912; pp. 130-290*.

Umpleby, Jos. B.—*Geology and Ore Deposits of the Myers' Creek and Oroville-Nighthawk Mining Districts.*—Washington (State) Geol. Surv., Bull. 5, 1911; 111 pp*; 50c.

Van Zandt, P. C.—*Glory-Hole Quarrying Process;* [Washington Portland Cement Co. quarries].—Cement Age, Dec.,1911, p. 244; 1500 w*; 35c.

———. *Review of Mining in the U. S. in* 1911; *Washington.*—Mining & Engg. World, Jan.27,1912; p. 241; 2400 w; 25c.

———. *Washington;* [Brief notes on developments in 1911].—M. & S. P., Jan.6, 1912, p. 87; 300 w; 35c.

———. *Washington State Coal Statistics* [By companies, 1911].—Coal Age, Jan.6, 1912, p. 415; 500 w; tables; 20c.

WEST VIRGINIA.

Brook, H. J., and J. H. Williams.—*Explosion at Welch, W. Va.*—Coal Age, Apr. 6,1912; p. 840; Apr.13, p. 871; 4000 w*; 30c.

Also described in Coal & Coke Op., Apr. 4,1912; p. 219; 1000 w; 20c. Also in Mines & Minerals, May, p. 579; 4500 w*; 35c.

Byrne, Geo.—*Blue Creek Oil Development, W. Va.*—Manfrrs. Record, Feb.29, 1912; p. 49; 2700 w*; 25c.

Clemons, M. J.—*A Comment on the Jed Explosion.*—Coal Age, May18,1912; p. 1049; 800 w; 20c.

Cornet, F. C.—*West Virginia Mining Accidents;* [Read to W. Va. Mng. Inst.; abstract].—Coal Age, June6,1912; p. 1132; 3500 w; 20c. Also in Coal Trade Bull., July1, p. 52; 4800 w; 25c. Also in Coal & Coke Op., July4, p. 417; 7000 w; 20c.

Day, D. T.—*Vast Storehouse of Fuel in Southern Petroleum and Natural Gas;* [Discusses resources and possibilities of utilization in Southern states].—Manfrrs. Record, Feb.22,1912; p. 67; 3000 w; 65c. Reprint in Nat. Gas Jnl., May, p. 205; 35c.

Johnston, J. K.—*Characteristics of the Thick-Vein Freeport Coal;* [Read to Coal Mng. Inst. of America; abstract].—Coal & Coke Op., Jan.11,1912; p. 20; 2000 w; 25c. Also in Coal Trade Bull., Feb.1, p. 37; 2400 w; 25c.

Laing, J.—*W. Virginia Coal Production. Year Ending June* 30, 1911; [Abstract of official report].—Coal & Coke Op., Feb.29, 1912; p. 143; 1000 w; table; 20c. Also in Coal Trade Bull., March1, p. 25; March15, p. 27; 3000 w; table of companies; 35c.

Ludlow, Edw.—*The Smokeless-Coal Field of West Virginia.*—Mines & Minerals, March,1912, p. 467; 2000 w*; 35c. Reprint in Coal Trade Bull., May1, p. 55; 25c.

Marshall, J. J.—*The Removal of Coal from the No. 2 Gas Seam in the Kanawha District;* [Reviews general mining practice; read to W. Va. Coal Mng. Inst., Dec., 1911].—Coal Trade Bull., Jan.15.1912, p. 47; 5000 w; 25c. Also in Coal & Coke Op., Dec.14,1911, p. 390; 3500 w*; 25c. Also in Coal Age, Dec,16, p. 302; 4800 w*; 25c.

Parsons, F. W.—*Mining Coal on the Virginian Railroad;* [Describes tributary coal fields in southern W. Virginia.—Coal Age, May18.1912; p. 1039; May25, p. —; 3000 w*; 30c.

Roberts, W. D.—*Mine Developments in the Southern States;* [New coal developments in W. Va.-Va.-Kent'y district].—Mining & Engg. World, Apr.13,1912; p. 807; 1000 w; 10c.

Victor, D.—*Coal Mine Statistics;* [Review of W. Virginia statistics for 1910; read to W. Va. Coal Mng. Inst., June,1912].—Coal Trade Bull., June15,1912; p. 42; 4800 w; 25c. Also in Coal Age. June15, p. 1176; 1200 w; 20c. Also in Coal & Coke Op., June20, p. 385; 4800 w; 25c.

Weldin, Wm. A.—*Modern Steel Tipple at Annabelle Mines;* [Marion county].—Mines & Minerals, Jan.,1912, p. 325; 4500 w*; 35c.

Zern, E. N.—*The Projection and Development of a Mining School;* [Proposed school for W. Virginia: read to W. Va. Coal Mng. Inst., June.1912]—Coal & Coke Op., June13,1912; p. 369; 3500 w; 25c.

———. *Bottom Creek Mine Explosion;* [Vivian, McDowell county, W. Va.].—Mines & Minerals, Jan.,1912; p. 332; 2000 w*; 35c. Also in Coal Trade Bull., Jan.15, 1912, p. 43; 2400 w; 25c.

———. *Detailed County Report on Wirt, Roane and Calhoun Counties.*—W. Va. Geol. Survey, 1911; pp. xx, 573; 3 maps; $2.00 (book).

———. *The Coal & Coke Ry. of West Virginia and Its Tributary Coalfields.*—Black Diamond, Feb.10,1912; p. 20; 1200 w*; 30c.

———. *Water Power for Coal Mines;* [Hydro-electric project of Appalachian Power Co., Va. and W. Va.].—Manfrrs. Record, Feb.22,1912; p. 96; 3000 w*; 65c.

———. *West Virginia During* 1911; [Coal review; also Virginia].—Coal Age, Jan.6,1912, p. 415; p. 416; 1600 w; 20c.

WISCONSIN.

For northern iron ranges, see under Michigan-Minnesota.

Bain, H. F.—*Flats and Pitches of the Wisconsin Lead and Zinc District.*—"Types of Ore Deposits," by H. F. Bain, and others; 1911; pp. 77-102*.

Boericke, W. F.—*Shaft-Sinking Costs in Wisconsin* [Zinc district].—E. & M. J., May 11,1912; p. 938; 500 w; 25c.

Butler and Dunlop.—*Metal Production in the Central States,* 1911.—See under Michigan.

Kennedy, J. E.—*Zinc Mining in Wisconsin;* [Review for 1911].—E. & M. J., Jan.6, 1912, p. 25; 600 w; 25c.

Kelly, P. K.—*The Wisconsin Zinc District.*—M. & S. P., Feb.17,1912; p. 276; 1800 w*; 20c.

Lewis, J. H.—*Review of Mining in the U. S. in* 1911; *Wisconsin* [Lead-zinc].—Mining & Engg. World, Jan.27,1912; p. 243; 6000 w; 25c.

Ruhoff, O. E.—*Magnetic Separation of Zinc-Iron Ores as Found in Southwestern Wisconsin;* [With recovery and sale of iron pyrite].—Met. & Cheml. Engg., May,1912; p. 278; 3200 w*; 35c.

WYOMING.

Beach, C. S.—*The Susie, Wyoming, Explosion.*—Coal Age, Apr.20,1912; p. 908; 1200 w*; 20c.

Boyle, A. C.—*Wyoming Mineral Industry in* 1911; [Brief notes on copper, gold, iron, asbestos, oil, coal].—M. & S. P., Jan.13,1912, p. 109; 600 w; 20c.

Brown, L. P.—*Phosphate.*—See Idaho.

Casares, J. and S. Pinna.—*Geyserites and Spring Deposits of Yellowstone Park, and Comparison with Ireland Geyserite* (in Spanish; read Dec.4,1911, and Jan.8,1912).—Soc. Española de Fisica y Quimfca, 1911; pp. —.

Chance, H. M.—*The Cambria Coal Field in Wyoming* [Historical data].—Coal Age, Apr.13,1912; p. 884; 1300 w; 20c.

Dart, A. C.—*Assay of Ores Containing the Platinum Group of Metals;* [at Rambler mine].—Met. & Cheml. Engg., April, 1912; p. 219; 750 w; 35c.

George, W. H.—*The Susie, Wyoming, Explosion;* [Kemmerer Coal Co.; Mine No. 4; Jan. 20, 1912].—Coal Age, Feb.24,1912, p. 650; 1000 w*; 20c.

Hewett, D. F.—*Sulphur Deposits in Sunlight Basin, Wyoming;* [Abstract from U. S. Geol. Survey Bull. No. 530, 1911].—Mng. Sci., June13,1912; p. 511; 1600 w; 20c.

Jamison, C. E.—*Review of Mining in the U. S. in* 1911; *Wyoming;* [Coal, oil, copper, gold, iron, silver, asbestos].—Mining & Engg. World, Jan.27,1912; p. 247; 2500 w; 25c.

Jamison, C. E.—*The Gold Mines South of Lander;* [Extracts from Bull. 2, Wyo. Geol. Survey].—Mining & Engg. World, Feb.24, 1912; p. 468; 1200 w; 10c.

Lewis, G. H.—*Mica Mining in Wyoming;* [Brief note on developments in Albany county].—Mining & Engg. World, Feb.3, 1912; p. 289; 100 w*; 10c.

Merrill, F. J. H.—*The Spring Valley Oilfield in Southwestern Wyoming.*—M. & S. P., Jan.27,1912; p. 163; 2100 w*; 20c.

Mitchell, G. E.—*Potash Deposits in America;* [Possibilities in Leucite Hills of Wyoming].—Cassier's Mag., Apr.,1912; p. 291-301*; 35c.

Phalen, W. C.—*Potash Salts; Summary for 1911;* [Reviews potash, alunite, leucite and silicate, kelp, etc., developments in U. S.].—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 31 pp.; 10c.

Richard, L. M.—*Gold-Bearing Conglomerates of Big Horn Mountains.*—Mining & Engg. World, March9,1912; p. 556; 700 w; 10c.

Rogers, A. F.—*Lorandite from the Rambler Mine, Wyoming.*—Amer. Jnl. of Sci., Feb.,1911, p. 105; 600 w; 65c.

Schultz, A. R., and W. Cross.—*Potash-Bearing Rocks of the Leucite Hills, Sweetwater county, Wyoming.*—U. S. Geol. Survey, Bull. 512; 1911; 39 pp*; 10c.

Abstract in Amer. Fertilizer, March23, 1912; pp. 39-47*; 25c.

Simmons, J.—*The Acme Co.'s Plant in Wyoming;* [Sheridan].—Coal Age, May11, 1912; p. 998; 3600 w*; 20c.

Simmons, J.—*The Cambrian Coal Field in Wyoming.*—Coal Age, March23,1912; p. 766; 2800 w*; 20c.

Simmons, J.—*The Sheridan, Wyo., Coal Field.*—Coal Age, Apr.13,1912; p. 866; Apr.27, p. 932; 3600 w*; 30c.

Stone, R. W.—*Coal Near the Black Hills, Wyoming-S. Dak.*—U. S. Geol. Survey, Bull. 499; 66 pp*; 10c.

Weeks, F. B.—*Phosphate,* 1911. See Idaho.

Wegemann, C. H.—*The Powder River Oil Field, Wyoming.*—U. S. Geol. Survey, Bull. 471-A; 1911; pp. 52-71*; 10c. Abstract in Mng. & Engg. World, June22, p. 1301; 1600 w*; 10c.

"R. H. W."—*Wyoming;* [Oil developments in 1911.—Oil & Gas Jnl., Jan.25, 1912, p. 24; 1200 w; 20c.

———. *Le pétrole au Wyoming;* [Notes on the Salt Creek oil field, Wyoming].—Pétrole, March1,1912; p. 3; 1000 w; 35c.

———. *Sulphur in Northern Wyoming;* [Park county].—Mng. Sci., March14,1912, p. 254; 500 w*; 20c.

CHAPTER II.—NORTH AMERICA†; SOUTH AMERICA; AFRICA.; ASIA; OCEANIA.

Canada and Newfoundland

CANADA AT LARGE

Armstrong, L. O.—*Mineral Occurrences and Investment Opportunities* [Along line of Canadian Pacific Ry.].—Canadian Mng. Jnl., March1,1912, p. 152; 3500 w; 25c.

Commission of Conservation, Canada.—*The Waterpowers of Canada;* [Hydro-electric].—Ottawa; 1911; 397 pp*; (book).

Denis, T. C.—*The Coal Fields of Canada.*—Canada Dept. Mines, Mines Branch Rep. No. 83; pp. 21-128*; $1.25.

Gray, E. W.—*Coal Mine Fatalities in Canada;* [N. S. and B. C.; mortality statistics].—Canadian Mng. Jnl., Feb.15,1912; p.115; 1500 w; 25c.

Hamman, H.—*Die wirtschaftliche Lage von Kanada mit besonderer Berücksichtigung der Eisen- und Stahl-Industrie;* [Industrial status of Canada, with special reference to the iron and steel industries].—Berlin, 1912; pp. 95; $1 (book).

McLeish, J.—*A General Summary of the Mineral Production of Canada* 1910.—Canada Dept. Mines, Mines Branch Publication No. 117; 1911; 37 pp.; 25c.

McLeish, J.—*The Production of Iron and Steel in Canada in* 1910.—Canada Dept. Mines, Mines Branch Publication No. 115; 38 pp.; 25c.

McLeish, J.—*The Production of Coal and Coke in Canada in* 1910.—Canada Dept. Mines, Mines Branch Publication No. 116; 31 pp.; 25c.

McLeish, J.—*Annual Report on the Mineral Production of Canada During the Calendar Year* 1910.—Canada Dept. Mines, Mines Branch, Paper No. 143; 1912; 328 pp; $1.

McLeish, J.—*Preliminary Report on the Mineral Production of Canada During the Calendar Year* 1911.—Canadian Mng. Jnl., March15,1912, p. 183; 6000 w; 25c. Also in E. & M. J., March16,p.561, 4000 w; 25c. Also in Mng. Sci., Apr.11, p. 334; 600 w; table; 20c. Also in Mng. World (London), Apr.13, p. 458; 1000 w; 35c. Also in Mng. Jnl., Apr.20, p. 371; 2400 w; 35c.

Porter, J. B., and others.—*An Investigation of the Coals of Canada, with Reference to their Economic Qualities; as Conducted at McGill University under the Authority of the Dominion Government.*—Canada Dept. Mines, Mines Branch; 6 volumes; Volume 1, 1912; Report No. 83; pp. 233; charts, plates; $1.25; Vol. 2, 1912; 189 pp*; $1.25.

Ries, H.—*The Clay and Shale Deposits of the Western Provinces of Canada.*—Canadian Mng. Inst., Jnl., No. 16, Oct.,1911; pp. 11-55*; $1.20.

Walker, T. L.—*Report on the Molybdenum Ores in Canada;* [N. S., N. B., Que., Ont., B. C.; concentration methods and uses; bibliography, etc.].—Canada Dept. Mines, Report No. 93; 64 pp*; 50c.

Abstract, chiefly on ore minerals and concentration methods, in Canadian Engr., Dec.7, p. 641; 3000 w*; 25c. Also in Mining & Engg. World, Dec.23, p. 1277; 3200 w; 10c. Also in Mng. Sci., Feb.29, p. 206, 2500 w; 20c.

Willmott, A. B.—*Opportunities in the Iron Industry in Canada;* [Industrial development and iron resources].—Canadian Mng. Jnl., March1,1912, p. 148; 1500 w; 25c.

———. *Canadian Coal Mining Laws;* [Summary of all known operative laws and regulations, dominion and provincial].—Coll'y Guardn., Apr.26,1912; p. 835; 2000 w; 35c.

———. *Mining in Eastern Canada in* 1911; [Brief review of gold, silver, nickel and iron in Ontario; N. S. coal, etc.].—M. & S. P., Jan.6.1912, p. 62; 1200 w; 35c.

———. *The Coal Resources of Canada;* [From report of Canada Conservation Commission]. — Coll'y Guardn., Apr.17, 1912; p. 17; 6000 w*; 35c.

ALBERTA

Coulthard, R. W.—*The Bellevue Mine Disaster.*—Canadian Mng. Jnl., Feb.1,1912; p. 79; 4000 w; 25c.

Jacobs, E.—*The Coal Fields of Western Canada.*—Coal Age, May4,1912; p. 968; 1800 w; 20c.

Lakes, A., Sr.—*Western Canada Coalfields and those of Colorado Compared.*—Brit. Columbia Mng. & Engg. Record, Feb., 1912; p. 208; 2400 w; 3c.

Lakes, A., Jr.—*Oil Signs and Prospects in Colorado and Alberta.*—Canadian Mng. Jnl., Apr.15,1912; p. 271; 1000 w; 25c.

McEvoy, Jas.—*Report on the Brule Lake Coal Claims;* [N. Alberta Coal Syndicate].—Canadian Mng. Jnl., March1,1912, p. 155; 4500 w*; 25c.

Orton, E.—*Clays and Clay Industries of Edmonton District.*—Canadian Engr., May 30,1912; p. 58; 1000 w; 25c.

Canadian Mng. Inst., Western Branch.—[*Proceeding and Short Abstracts of Papers Read at Twelfth Annual Meeting, Vancouver, Feb., 1912.*—B. C. Mng. Exchange, Feb.,1912; p. 14; 9000 w; 45c. Also in Canadian Mng. Jnl., Aur.1, p. 235; 3500 w; 25c.

———. *Calgary Hydro-electric Plant.*—El. World, Dec.23,1911; p. 1539-1542*; 45c.

———. *Coal Mining in Alberta in* 1910; *Annual Report of the Coal Mines Branch, Alberta.*—Canadian Mng. Jnl., Feb.1,1912; p. 75; p. 93; Feb.15, p. 125; 9000 w*; 35c. Illustrated abstract in Coll'y Guardn., Apr. 17, p. 26, 1000 w*; 35c.

———. *Indications of the Occurrence of Oil in Western Canada.*—Mining & Engg. World, March16,1912; p. 600; 500 w; 10c.

———. *Medicine Hat and the Canadian Gas Supply.*—Nat. Gas Jnl., June,1912; p. 251; p. 264; 1000 w; 35c.

———. *Oil and Gas;* [In Alberta, British Columbia, and Katalla, Alaska].—B. C. Mng. & Engg. Record, Oct.,1911, p. 91; 2800 w*; 35c.

BRITISH COLUMBIA

Avery, C. M.—*The New Granby Slag-Disposal Plant.*—"The Labor Saver," April. 1912; 2¼ pp*. Abstract in E. & M. J., May11, p. 935; 1000 w*; 35c.

Brewer, W. M.—*Marble Bay and Brittannia Copper Mines, B. C.;* [Read to Canadian Mng. Inst., Western branch].—Canadian Mng. Jnl., March15,1912, p. 196; 1000 w; 25c.

———

†Excepting U. S. and Alaska.

Camsell, Chas.—*Diamonds in the Similkameen.*—Brit. Columbia Mng. & Engg. Record, Jan.,1912; p. 168; 2700 w; 35c.

Canadian Mng. Inst., Western Branch.—[*Proceeding and Short Abstracts of Papers Read at Twelfth Annual Meeting, Vancouver, Feb., 1912.*—B. C. Mng. Exchange, Feb.,1912; p. 14; 9000 w; 45c. Also in Canadian Mng. Jnl., Apr.1, p. 235; 3500 w; 25c.

Clapp, C. H.—*Geology of Nanaimo Coal District;* [Read to Canadian Mng. Inst.].—Canadian Mng. Jnl., May15,1912; p. 334; 1100 w; 25c.

Dushman, S.—*Gold and Silver Production of Canada.*—M. & S. P., Dec.30,1911, p. 833; 1000 w; 25c.

Fowler, S. S.—*Costs and Cost-Conditions at Bluebell Mine, B. C.*—Canadian Mng. Inst., Bull. 18, Feb.,1912; p. 3-12; $1.20.
Extract on living conditions; in M. & S. P., June1,1912; p. 764; 750 w; 20c.

French, A. G.—*The French Process;* [Nelson, B. C., plant for electrolytic extraction of zinc from Slocan lead-zinc-silver ores].—Canadn. Mng. Jnl., Jan.1,1912, p. 6; 1000 w; 25c.

Galloway, C. F. J.—*Bear River Coal Field, B. C.*—Canadian Mng. Jnl., May15, 1912; p. 335; June1, p. 368; 1500 w; 40c.

Galloway, C. F. J.—*Coal Lands in Northern Cariboo, B. C.*—Canadian Mng. Jnl., Apr.15,1912; p. 278; 1000 w; 25c.

Gosnell, R. E.—*The Year-Book of British Columbia,* 1911.—Victoria, B. C., 1911; pp. —; $1 (book).

Graham, Chas.—*Explosion at Merritt.*—Coal Age, May11,1912; p. 1005; 1000 w*; 20c.

Gray, Alex.—*The Mother Lode Mill, Sheep Creek, B. C.*—Mng. Jnl., May25,1912, p. 513; 400 w; 35c.

Hedley, R. R.—*Work of the Cons. Mining & Smelting Co. of Canada, Ltd.;* [Trail silver-lead-zinc and copper mining and smelting; and outlook for iron; read to Canadian Mng. Inst., Toronto, March,1912].—Canadian Mng. Jnl., Apr.1,1912; p. 222; 1800 w; 25c. Also abstracted in E. & M. J., June1, p. 1096; 1100 w; 25c.

Hedley, R. R.—*New Coal Fields in the Northern Interior of British Columbia;* [Read to Canadian Mng. Inst., Western branch].—Canadian Mng. Jnl., March15, 1912, p. 207; 1600 w; 25c.

Hedley, R. R.—*Mining in British Columbia;* [Review of 1911; gold, silver, lead, zinc, copper].—Canadian Engr., Jan.11,1912, p. 139; 1800 w; 30c.

Jacobs, E.—*Metallurgy in British Columbia in* 1911; [Dwight-Lloyd roasters; Elmore vacuum process; French process; stamps and cyaniding; copper smelting; silver-lead concentration].—Canadian Mng. Jnl., Feb.1,1912; p. 82; 8000 w; 25c. Also in Met. & Cheml. Engg., Feb.,1912; p. 112; 1800 w; 35c.

Jacobs, E.—*Mining in Coast Districts of British Columbia.*—B. C. Mng. Exchange, Jan.6,1912, p. 70; 600 w; 35c. Also in Coal Age, Jan.13, p. 454; 800 w; 20c.

Jacobs, E.—*Review of Mining and Production in British Columbia in* 1911.—Canadian Mng. Jnl., Jan.1,1912; p. 7; 4500 w; 25c. Also in M. & S. P., Jan.6,1912; p. 68; 3000 w; 35c. Also in E. & M. J., Jan.6, p. 75; 2000 w; 35c. Also in Mining & Engg. World, Jan.27, p. 261; 7000 w; 25c.

Jacobs, E.—*Coal Mining in British Columbia;* [Review for 1911].—M. & S. P., Jan.6,1912, p. 70; 600 w; 35c.

Jacobs, E.—*Permanent Board of Arbitration;* [Western Coal Operators Asso. of Canada and District 18 U. M. W. of Amer.].—Coal Age, June1,1912; p. 1101; 400 w; 20c.

Jacobs, E.—*The Coal Fields of Western Canada.*—Coal Age, May4,1912; p. 968; 1800 w; 20c.

Jacobs, E.—*Good Prospect for Record Mining Season;* [Outlines prospects and probable developments for 1912].—Br. Columbia Mng. Exchange, May,1912; p. 5; 3200 w*; 35c.

Janin, Chas.—*Review of Gold Dredging in* 1911.—M. & S. P., Jan.13,1912, p. 101; 3000 w*; 20c.

Lakes, A. — *Western Canada Coalfields and those of Colorado Compared.*—B. C. Mng. & Engg. Record, Feb.,1912; p. 208; 2400 w; 35c.

Lakes, A., sr.—*Snowslides in Mining Districts in British Columbia.*—Mining & Engg. World, March2,1912, p. 505; 2500 w*; 10c.

Lakes, A.—*Geological First Impressions of British Columbia.*—B. C. Mng. & Engg. Record, Dec.,1911; p. 149; 1200 w; 35c.

Lee, G. M.—*The Granby Smelter.*—Met. & Cheml. Engg., March,1912; p. 147; 4000 w*; 35c.

Levy, E.—*Note on Mining and Concentrating Costs at Le Roi No. 2 Mines, Rossland, B. C.*—Canadian Mng. Inst., Bull. 17, Dec.,1911, p. 117; 500 w; $1.20.

Robertson, Wm. F.—*Preliminary Review and Estimate of Mineral Production for Year* 1911; [Official report of provincial mineralogist; gold, silver, copper, lead, zinc, iron, coal and coke, building materials; also by districts].—Victoria, B. C., 1912; 29 pp.; 50c.
Abstract in Mining & Engg. World, March16, p. 596; 1200 w; 10c. Abstract on coal only; in Coll'y Guardn., Apr.17, 1912; p. 24; 3000 w*; 35c.

Vallance, J.—*The Standard Mine, Silverton, B. C.*—[Describes silver-lead-zinc ores].—Canadian Mng. Inst., Jnl.; No. 16, Oct., 1911; pp. 55-58; 1000 w; $1.20.

Williams, Percy.—*Mining on the Coast of British Columbia;* [Review of various coastal gold camps].—Mng. Mag., Dec.,1911, p. 449; 1200 w*; 35c.

Wright, F. S.—*Groundhog Mountain Coalfields.*—B. C. Mng. Exchange, April, 1912; p. 12; May, p. 12; 2700 w*; 65c.

———. *A New Canadian Metal;* [Canadium of platinum group from Nelson district, B. C.].—Mining & Engg. World, Dec. 23,1911, p. 1281; 3000 w; 10c.

———. *A Sketch of the Atlin District;* [Gold telluride ores].—Mining & Engg. World, June1,1912; p. 1144; 500 w; 10c.

———. *Bear River Coal Field.*— B. C. Mng. Exchange, April,1912; p. 17; 1000 w*; 35c.

———. *British Columbia's Coal Mines;* [Review for 1911].—Canadian Engr., May 23,1912; p. 712; 1500 w; 25c.

———. *Coal Mining at Queen Charlotte Islands.*—B. C. Mng., etc., Record, Oct., 1911, p. 84; 600 w; 25c.

———. *Consolidated Mng. & Smelting Co. of Canada, Ltd.*—Canadian Mng. Jnl., Jan.1,1912, p. 28; 1800 w; 25c.

———. *Disaster at Diamond Vale Mine;* [Explosion at Merritt, Br. Columbia, in Nicola coal field].—B. C. Mng. & Engg. Record, March,1912; p. 239; 9000 w; 35c. Also described in Coal Age, Apr. 27,1912; p. 939; 750 w; 20c.

———. *Iron and Steel Industry;* [Outlook in B. C., especially for electrosteel].—

B. C. Mng. & Engg. Record, Dec.,1911; p. 133; 1500 w; 35c.

———. *Kootenay Bonanza Mines, Ltd.*—B. C. Mng. & Engg. Record, March,1912; p. 232; 3600 w; 35c.

———. *Mercury at Field.*—B. C. Mng., etc., Record, Nov.,1912; p. 116; 700 w; 35c.

———. *Oil and Gas;* [In Alberta, British Columbia, and Katalla, Alaska].—B. C. Mng. & Engg. Record, Oct.,1911, p. 91; 2800 w*; 35c.

———. *Provision for Mine Rescue Work in British Columbia.*—Canadian Mng. Jnl., June1,1912; p. 375; 1200 w; 25c.

———. *Sheep Creek;* [Discusses development of this gold field].—B. C. Mng., etc., Record, Nov.,1911, p. 118; Dec., p. 144; Jan.,1912, p. 178; Feb., p. 216; March, p. 236; 15,000 w; $1.50.

———. *Slocan Star Mines, Ltd.*—B. C. Mng., etc., Record, Oct.,1911, p. 88; 1800 w*; 35c.

———. *The Anthracite Discoveries in Northern British Columbia;* [Groundhog Mountain].—B. C. Mng. Exchange, Dec., 1911, p. 15; 1200 w; 35c.

———. *The Reported Platinum Deposits at Nelson.*—B. C. Mng. & Engg. Record, Oct.,1911, p. 76; March,1912; p. 227; 3000 w; 65c.

———. *The Ymir Camp;* [Silver-lead-zinc, gold].—B. C. Mng. & Engg. Record, Dec.,1911; p. 155; 2500 w; 35c.

———. *Unsound Company Promotions;* [Discusses Colonial Oil Co., and Hills Bar Gold Dredging Co., caisson dredging on Fraser river].—B. C. Mng. & Engg. Record, Feb.,1912; p. 198; 2200 w; 35c.

———. *Vancouver Island Power Co.'s New Power Plant.*—Brit. Columbia Mng. & Engg. Record, Sept.,1911, p. 38; 2500 w*; 35c.

———. *Western Copper Group of Mineral Claims;* [Mines and geology of Swanson Bay district].—B. C. Mng. & Engg. Record, Jan.,1912; p. 184; 2100 w*; 35c.

MANITOBA

Jones, J. E.—*Discovery of Gold in Manitoba;* [Minitonas district].—U. S. Consul. Rep., Feb.12,1912; p. 653; 300 w; 20c.

NEW BRUNSWICK

Lakes, A.—*The Canadian Oil Shales and Their Comparison with Some Elsewhere;* [Colorado].—Canadian Mng. Jnl., May1, 1912; p. 314; 1000 w; 25c.

Walker, T. L.—*Wolframite in New Brunswick;* [From "Economic Geology"].—Mining & Engg. World, Jan.13,1912; p. 73; 600 w; 10c.

NEWFOUNDLAND AND LABRADOR COAST

Goodale, S. L.—*A Miner's Summer Trip to Newfoundland;* [Iron, copper, chrome, lead-zinc].—Colo. School of Mines Mag., Feb.,1912, p. 96; 1500 w; 35c.

McGrath, P. T.—*Newfoundland in 1911.*—London, 1911; pp. 271; (book).

———. *Garnet Veins on Labrador Coast;* [St. Michael's Bay, north of Belle Isle].—Mines & Minerals, Jan.,1912; p. 357; 200 w; 35c.

NOVA SCOTIA.

Fréchette, H.—*Western Portion of the Torbrook Iron Ore Deposits, Annapolis County, N. S.*—Canada Dept. Mines, Mines Branch Bull. No. 7; 1912; 20 pp*; 50c.

Gray, F. W.—*The Coal Trade of Nova Scotia During* 1911; [A Resumé].—Canadian Mng. Jnl., Jan.15,1912, p. 48; 5500 w*; 25c.

Holman, C. V. and F. P. Ronnan.—*[Discussion of Possibilities of Profitable Gold Mining in Nova Scotia].*—Ind'l Advocate, March,1912; p. 7-12; 8000 w; 35c.

Jennison, Wm. F.—*Gypsum Deposits of the Maritime Provinces;* [with other occurrences, preparation, uses, etc.].—Canadn. Dept. Mines, Mines Branch Report No. 84; 1911; 171 pp.*; 50c.

Abstract on Nova Scotia deposits in Canadian Mng. Jnl., Dec.15,1911, p. 795; Jan.1, p. 10; 9000 w*; 45c.

Lane, A. C.—*Native Copper Deposits.*—"Types of Ore Deposits," by H. F. Bain, and others; 1911; pp. 133-139*.

Reprinted from Canadian Mng. Inst., Jnl., 1911. Abstract in Mining & Engg. World, Apr.8,1911, p. 731; 2700 w; 10c. Also in W. Australian Mng., etc., Jnl., May 27.1911, p. 8; 2700 w; 50c. Also in Mng. Sci., Feb.29,1912; p. 211; 2800 w; 20c.

Rickard, T. A.—*The Domes of Nova Scotia.*—Instn. of Mng. & Met'l'gy: Bull. 90, March,1912: 55 pp.*; 50c. (Discussion), Bull. 92, May, pp. 35-38.

Abstract in Canadian Mng. Jnl., Apr.1, 1912, p. 224; Apr.15, p. 273; May1, p. 310; May15, p. 345; 16,000 w*; 80c. Also in M. & S. P., March30, p. 492; 4000 w*; 20c. Also in Ind'l Advocate, April,1912; p. 7; May, p. 7; June, p. 7; 16,000 w; 85c.

Warren, C. H.—*The Barite Deposits of Five Islands, N. Scotia.*—Econ. Geol'y, Dec., 1911; pp. 799-807*; 65c.

Dept. of Mines of Nova Scotia.—*Report for* 1911.—Halifax, 1912; pp. 260, xxxvii. Abstract in Canadian Mng. Jnl., March15, 1912, p. 200; April1, p. 242; 2000 w*; 40c.

———. *Coal Mining in Nova Scotia in* 1911.—Coll'y Guardn., Apr.17,1912; p. 27; 1500 w*; 35c.

ONTARIO

Adams, F. D. and A. E. Barlow.—*Important Corundum Occurrences in Ontario;* [Abstract from Canada Dept. Mines, Mem. No. 6].—Mining & Engg. World, Jan.13,-1912; p. 60; 750 w; 10c.

Baelz, W. *Reisebericht aus den Goldfeldern des nördlichen Ontarios;* [Notes on a trip to the goldfields of northern Ontario].—Zts. f. prakt. Geol., Nov.,1911, pp. 377-385*; 75c.

English translation by Prof. T. L. Walker: "The Goldfields of Northern Ontario," in Canadian Mng. Jnl., May1,1912; p. 299; 6000 w*; 25c.

Browne, D. H.—*Recent Improvements and Additions to the Smelting Plant of the Canadian Copper Co.*—Canadian Mng. Inst., Bull. 18, Feb.,1912; p. 33; 2500 w; $1.20.

Burrows, A. G.—*The Porcupine Gold Area of Northern Ontario;* [Geology; summary of more complete official report].—Canadian Mng. Inst., Jnl., No. 16, Oct.,1911; pp. 59-63; $1.20.

Cole, A. A.—*The Mining Industry in that Part of Northern Ontario Served by the T. & N. O. Ry.*—Toronto, 1912; 57 pp.*; 75c.

Colvocoresses, G. M.—*Gowganda During* 1911.—Canadian Mng. Jnl., Apr.15,1912; p. 256; 3500 w*; 25c.

Corkill, E. T.—*Report on the Mining Accidents in Ontario for Jan., Feb. and March,* 1912—Ontario Bur. Mines, Bull. 10; 1912; 11 pp.

Corkill, E. T.—*Report on the Mining Accidents in Ontario in 1911.*—Ont. Bureau of Mines, Bull. 9; 1912; 25 pp.; 50c.

Davis, N. B.—*The Character and Possible Origin of the Green Dolomites of Northern Ontario* [Gold fields].—Canadian Mng. Inst., Jnl., No. 16, Oct.,1911, pp. 173-184*; $1.20.

Dobbs, W. S.—*Vipond Porcupine Gold Mines Co., Ltd.*—M. & S. P., June1,1912; p. 763 · 750 w; 20c.

Dushman, S.—*Gold and Silver Production of Canada.*—M. & S. P., Dec.30,1911, p. 833; 1000 w; 25c.

Emmons, S. F.—*Cobalt District, Ontario.*—"Types of Ore Deposits," by H. F. Bain, and others; 1911; pp. 140-156*.

Reprinted from Mng. & Sc. Press, March 18,1911; [An address read to Geol. Soc. of Washington, Jan.26,1910].

Fink, C. G.—*Vacuum Furnace Metallurgy;* [Tests on some complex Canadian cobalt-silver-nickel ores; read to Amer. Electrocheml. Soc., April, 1912; abstract].—Met. & Chemi. Engg., May,1912; p. 296; 1000 w; 35c.

[Frasch, H.].—*Presentation of the Perkin Medal to Herman Frasch;* [Reviews Frasch's work on de-odorizing of Ontario petroleum and on Louisiana sulfur].—Met. & Cheml. Engg., Feb.,1912, p. 73; 8000 w*; 35c. Also in Jnl. of Ind'l & Engg. Chem'y, Feb., p. 128-140; 8000 w; 65c. Also in Soc. of Chem'l Ind'y Jnl., Feb.29, p. 169; 8000 w; 65c.

Gibson, T. W.—*Ontario Mineral Output in* 1911; [Brief review of gold, silver, nickel, cobalt, pyrite, oil, gas, iron, corundum, etc.].—E. M. J., Jan.6,1912, p. 73; 2500 w*; 25c. Also in Canadian Mng. Jnl., Jan.15, p. 56; 3600 w*; 25c.

Goetz, Al.—*The Eastern Michipicoten Iron Range;* [East of Lake Superior; north of Sault Ste. Marie; mines and geology].—E. & M. J., June1,1912; p. 1090; 3500 w*; 25c.

Graham, S. N.—*The McIntyre Mine and Mill, Porcupine.*—Canadian Mng. Jnl., Apr. 1,1912; p. 233; 750 w*; 25c.

Gray, Al.—*Milling Stage Attained at Porcupine.*—Mng. Jnl., Apr.27,1912; p. 420; 2000 w; 35c.

Gray, Alex.—*What Cobalt Silver Mines Have Done;* [Review for 1911].—Mng. Jnl., Jan.20,1912; p. 63; 5000 w; 35c.

Gray, Alex.—*Ontario Nickel Industry in* 1911; [Also copper].—Mng. Jnl., Jan.27. 1912; p. 85; 1500 w; 35c.

Gray, Alex.—*Northern Ontario Silver Mines in* 1911.—Mng. Jnl., Jan.6,1912, p. 25; 1600 w; 35c.

Gray, Alex.—*The Porcupine Outlook.*—Mng. Jnl., Jan.6,1912, p. 35; 4500 w; 35c.

Hall, A. E.—*Speeds and Cost of Diamond Drilling at Porcupine, Canada.*—Columbia School of Mines, Quar'ly; April, 1912; pp. 229-232; 1500 w; 65c.

Abstract in Engg. & Contractg., Apr.24, p. 462; 1000 w; 20c. Also in Mng. Sci., May30, p. 475; 1000 w; 20c.

Hargrave, C. L.—*Cyaniding at Nova Scotia Mill;* [Cobalt, Ontario; silver sulphides and antimonides].—E. & M. J., June 8,1912; p. 1133; 2500 w; 25c.

Haultain, H. E. T.—*Silver and Gold Mining in Ontario;* [Review for 1911].—Canadian Engr., Jan.11,1912, p. 143; 1000 w; 30c.

Hille, F.—*A Few Remarks on Some of the Gold Deposits of Ontario;* [Discusses their promotion and development].—Canadian Mng. Jnl., May15,1912; p. 333; 1500 w; 25c.

Horé, R. E.—*Mines and Ores of Porcupine.*—E. & M. J., May4,1912; p. 891; 2600 w*; 25c.

Hore, R. E.—*Decrease of Values in Ore Shoots with Depth;* [Michigan copper; Cobalt, Ont., silver; Porcupine, Ont., gold].—Canadian Mng. Jnl., Apr.15,1912; p. 260; 4000 w; 25c.

Hore, R. E.—*The Silver Fields of Nipissing.*—Canadian Mng. Inst., Bull. 17, Dec., 1911, pp. 81-106*; $1.20.

Hughes, Ben.—*Northern Ontario, the Land of Promise.*—Canadian Mng. Jnl., March1,1912, p. 150; 2600 w; 25c.

Hughes, B.—*Review of Mining in Foreign Countries in* 1911; *Ontario* [Cobalt and Porcupine].—Mining & Engg. World, Jan. 27, 1912; p. 267; 4500 w; 25c.

Ingalls, W. R.—*A Visit to Porcupine;* [Chiefly on Hollinger and Dome properties].—E. & M. J., March30,1912; p. 645; 2500 w*; 25c.

Jacobs, E.—*The Canadian Mining Institute Trip to Porcupine and Cobalt.*—Mining & Engg. World, March23,1912; p. 663; 3200 w; 10c. Also in Canadian Mng. Jnl., Apr.1, p. 219; 3000 w; 25c.

Knight, C. W.—*Recent Underground Work at Cobalt;* [Geology of silver deposits].—Canadian Mng. Inst., Bull. 18, Feb., 1912; p. 21; 2200 w*; $1.20.

Knight, C. W.—*Geology of the Cobalt District, Ontario;* [Critical notes on Hore's earlier paper].—Amer. Inst. Mng. Engrs., Bull. 60, Dec.,1911, p. 1035; 1000 w; $1.15.

Leith, C. K.—*The Lake Superior Type of Iron-Ore Deposits.*—"Types of Ore Deposits," by H. F. Bain, and others; 1911; pp. 53-76.

Machin, H. A. C.—*Lake of the Woods.*—Canadian Mng. Jnl., March1,1912, p. 147; 1000 w; 25c.

McMillan, J. G.—*Report on the Geology of the Area Along the T. & N. O. Ry., Trial Line Between Gowganda and Porcupine.*—Toronto, 1912; 24 pp.*; 75c.

Abstract in Mining & Engg. World, July 20, p. 110; 2100 w; 10c.

Moore, E. S.—*The Sturgeon Lake Goldfield.*—Ontario Bureau of Mines, 20th. Ann. Rep., 1911; pp. 133-157*; $1. Reprinted in Canadian Mng. Jnl., Nov.1,1911, p. 701; 7500 w*; 25c. Abstract in Mng. Sci., March 21,1912; p. 272; 2000 w*; 20c.

Mudge, A. L., and others.—*Hydro-Electric Power Development of the British Canadian Power Co.;* [at Cobalt, Ontario, mines].—Canadn. Soc. of Civ. Engrs., Proc. f. Jan.,1911; pp. —.

Neilly, B.—*Refining Silver Bullion from Cobalt, Ont., Ores;* [U. S. Pat. No. 1,004,-676; Oct.3,1911.—Mining & Engg. World, Feb.3,1912; p. 296; 250 w; 10c.

O'Connell, Chas. A.—*The Future of Cobalt;* [Abstract; read to Canadian Mng. Inst.].—Mng. & Sc. Press, March23,1912; p. 429; 1200 w*; 20c.

Rea, T. H.—*The Rea Mine, Porcupine.*—Canadian Mng. Jnl., Jan.1,1912; p. 16; 1400 w*; 25c.

Richards, Wm. J.—*Lake of the Woods Mining District.*—Mines & Minerals, June 1912; p. 665; 1600 w*; 35c.

Russell, H. Y.—*Notes on Porcupine;* [Ore bodies and geology].—E. & M. J., March23, 1912; p. 594; 1000 w; 25c.

Scott, J.—*Die kanadische Petroleumindustrie;* [The oil industry of Ontario in 1910; from Petroleum Rev.].—Organ d. . . Bohrtechniker. Feb.1,1912; p. 34; 750 w*; 45c.

Shaw, S. F.—*Some Notes on Porcupine;* [Geology and ores of various properties].

—E. & M. J., Dec.23,1911, p. 1223; 3500 w*; 25c.

Smith, C. B.—*Power for Cobalt Mines, Ontario;* [Reviews various hydro-electric companies supplying this field].—Asso. of Engg. Soc., Jnl.: Jan.,1912; p. 56; 1200 w; 50c. Abstract in Mining & Engg. World, March2, p. 503; 1200 w*; 10c.

Thomson, G. W.—*Diamond Drill Results at Pearl Lake, Porcupine.*—Canadian Mng. Jnl., Apr.1,1912; p. 238; 2000 w; 25c.

Uglow, W. L.—*The Alexo Mine; A New Nickel Occurrence in Northern Ontario.*—Canadian Mng. Inst., Jnl., No. 16, Oct.,1911, pp. 151-173*; $1.20.

———. *Advanced Statement of the Mineral Production of Ontario,* 1911; [Preliminary provincial report].—Canadian Mng. Jnl., March15,1912. p. 191; 1000 w; 25c. Also in Canadn. Engr., March28, p. 468; 1800 w; 25c.

———. *Dome and Hollinger Reports and Porcupine Outlook.*—E. & M. J., Feb.3,1912; p. 251; 2600 w; 25c.

———. *Nickel in Canada in* 1911.—M. & S. P., May11,1912; p. 662; 300 w; 20c.

———. *Operations at the McKinley-Darragh Mine;* [in 1911; from annual report].—Mining & Engg. World, Apr.27,1912; p. 905; 1000 w*; 10c.

———. *Porcupine vs. Goldfield;* [Compares development of companies].—Industrial Advocate, Feb.,1912; p. 9; 3000 w; 45c.

———. *Power Development at Sandy Falls on the Mattagami River;* [Porcupine].—Engg. Record, March30,1912; p. 344; 1500 w*; 20c.

———. *Recent Oil and Gas Developments in Ontario.*—Petroleum World, April, 1912; p. 170; 1000 w; 35c.

———. *The Con. Ophir Mines, Ltd., Lake of the Woods, Ont.*—Canadian Mng. Jnl., Feb.15,1912; p. 122; 2500 w; 25c.

———. *The Dome Mine, Porcupine.*—E. & M. J., Apr.13,1912; p. 731; 1200 w*; 25c.

———. *The Hollinger Mill;* [Proposed treatment plans; from annual report for 1911].—Canadian Mng. Jnl., Apr.1,1912; p. 230; 1000 w; 25c.

———. *The Lucky Cross Mines, Swastika.*—Canadian Mng. Jnl., Jan.1,1912; p. 20; 1000 w*; 25c.

———. *The Ontario* 110,000-*Volt Transmission System;* [From "Electrical World"].—Electrician, Jan.26,1912; p. 631; Feb.2, p. 667; Feb.9, p. 708; Feb.16, p. —; 7500 w*; 80c.

QUEBEC

Ball, H. A.—*Placer Mining in the Province of Quebec;* [Ruisseau des Meules district].—M. & S. P., May25,1912; p. 727; 1800 w; 20c.

Cirkel, F.—*Hydraulicking in Beauce County, Quebec.*—E. & M. J., June1,1912; p. 1083; 4800 w*; 25c.

Cirkel, F.—*The Amherst, Quebec, Graphite Deposits.*—Canadian Mng. Inst., Bull. 17, Dec.,1911, pp. 107-116*; $1.20.

Abstract in Mining & Engg. World, Feb. 3,1912, p. 295; 2800 w; 10c. Also in Mines & Minerals, Apr.,1912; p. 573; 1600 w*; 35c.

German abstract in Erzbergbau, March 15, p. 83; 1500 w; 35c.

Denis, T. C.—*The Mineral Industry in the Province of Quebec During* 1911.—Canadn. Mng. Jnl., Jan.1,1912; p. 23; 2000 w; 25c.

Warren, C. H.—*Ilmenite Rocks near St. Urbain, Quebec.*—Amer. Jnl. of Sci., March, 1912; pp. 263-267*; 65c.

Willrich, G.—*Gold Mining Revival in Quebec Province.*—U. S. Consul. Rep., March8,1912; p. 992; 400 w; 20c.

Reprint in Mining & Engg. World, May 25, p. 1094; 10c.

———. *Advanced Statement of the Mineral Production of Quebec,* 1911; [Preliminary provincial report].—Canadian Mng. Jnl., March15,1912, p. 189, 2000 w; 25c.

———. *Placer Mining in Quebec.*—Mines & Minerals, Feb.,1912; p. 422; 1000 w*; 35c.

———. *McKenzie Gold Mine;* [From report of Chibougamau Commission].—Canadian Mng. Jnl., Feb.15,1912; p. 118; 600 w*; 25c.

———. *Peat Industries, Ltd;* [Plant near Farnham].—Canadian Peat Soc., Jnl; Feb.,1912; p. 21; 800 w; 35c.

SASKATCHEWAN

Bell, Geo.—*Lignite in Saskatchewan.*—Canadn. Engr., Feb.22,1912; p. 327; 600 w; 25c.

Wynne-Roberts, R. O.—*Saskatchewan Fuels and Gas;* [Lignite resources and their development; read to Regina Soc. of Arts & Sci.].—Canadian Engr., March21, 1912; p. 430; 3000 w; 25c.

YUKON.

Cole, G. C.—*New Gold Discovery in Yukon;* [60-Mile river, 120 miles sw. of Dawson].—U. S. Consul. Rep., Jan.29,1912, p. 460; 400 w; 20c.

Dushman, S.—*Gold and Silver Production of Canada.*—M. & S. P., Dec.30,1911, p. 833; 1000 w; 25c.

Janin, Chas.—*Gold Dredging in Alaska and the Yukon.*—Mng. Mag., Jan.,1912, p 45; 2000 w*; 45c.

Lakes, A.—*Present Outlook and Conditions in the Klondike Region.*—Mining & Engg. World, Apr.27,1912; p. 916; 1400 w; 10c.

Lewington, G. A. R.—*Alaska and the Yukon; Prospecting conditions and regulations, etc.*—M. & S. P., March30,1912; p. 473; 1800 w*; 20c. Also in Mng. Mag., April, p. 280; 1000 w; 45c.

Perry, O. B.—*Yukon Gold;* [Review of dredging and sluicing operations of Yukon Gold Co. in 1911].—M. & S. P., May11,1912; p. 658; 1400 w; 20c.

Tyrrell, J. B.—*The Law of the Pay-Streak in Placer Deposits;* [Especially in Klondike district].—Instn. of Mng. & Met'l'gy, Bull. 92, May,1912; pp. 13*; 50c. (Discussion), Bull. 93, June, pp. 3-12; 50c.

Abstract in M. & S. P., June1, p. 760; 3800 w*. Also in Canadian Mng. Jnl., June 1, p. 362; 5000 w*; 25c. Also in Mining & Engg. World, June8, p. 1195; 4000 w*; 10c. Also in Mng. Sci. June13, p. 508; 4000 w*; 20c. Also in Mines & Methods, June, p. 512; 4000 w*; 20c.

Tyssowski, J.—*Gold Dredge Installations During* 1911; [U. S., Alaska and Yukon].—E. & M. J., March16,1912, p. 555; 1000 w; 25c.

———. *The Yukon;* [Recent developments].—Brit. Columbia Mng. & Engg. Record, Nov.,1911; p. 110; 2600 w; 35c.

———. *Yukon Mining Legislation;* [New Act of April 1, 1912, on placer claims and joint labor performance].—Canadian Mng. Jnl., May15,1912; p. 331; 1200 w; 25c.

Mexico

MEXICO AT LARGE

Brady, A. C.—*Review of Mining in Foreign Countries in* 1911; *Mexico* [Chihuahua, Durango, Guanajuato, Hidalgo, Jalisco, Mexico, San Luis Potosi, Tamaulipas-Veracruz, Guerrero, Sinaloa, Oaxaca, Tepic, Zacatecas, L. California, Puebla, Coahuila, N. Leon].—Mining & Engg. World, Jan.27, 1912; p. 249-258; 15,000 w; 25c.

Sonora, by J. I. Cohn; page 258; 4000 w; 25c.

Carter, T. L.—*Mining in Mexico;* [General review of operating conditions].—Engg. Mag., March,1912; pp. 933-952*; 35c.

Graham, S. N.—*Some Old Methods in Mexican Mining and Metallurgy.*—Canadian Mng. Jnl., May1,1912; p. 308; 1000 w*; 25c.

MacFarren, H. W.—*Textbook of Cyanide Practice;* [Includes notes on Mexican practice with bibliographies].—New York, 1912; pp. 291*; $3 (book).

Phillips, Wm. B.—*Mining Conditions in Mexico.*—Mex. Mng. Jnl., May,1912; p. 17; 1500 w; 25c.

Richardson, D. A.—*Origin and History of Mining Locations in Mexico.*—Mining & Engg. World, Feb.10,1912; p. 357; 2000 w; 10c.

Richardson, D. A.—*Conveyance of Mining Property in Mexico.*—Mining & Engg. World, May4,1912; p. 957; 2000 w; 10c.

Richardson, D. A.—*The Extent of Mining Titles under Mexican Law*—Mining & Engg. World, March30,1912; p. 711; 3200 w; 10c.

Spence, Geo.—*Is "Cheap" Labor Economical?* [Discusses efficiency of cheap Mexican labor].—M. & S. P., March23,1912; p. 442; 1800 w; 20c.

Thomas, K.—*Mining in Mexico in* 1911; [General review of industrial conditions].—E. & M. J., Jan.6,1912, p. 77; 3600 w; 25c.

Pan American Union.—*Mexico, A General Sketch.*—Washington, D. C., 1911; pp. 409*.

———. *La mineria en la Baja California;* [Mining districts of Lower California; gold, silver, copper].—Mex. Mng. Jnl., May, 1912; p. 61; 1100 w; 25c.

———. *Mexico; Berggesetz vom* 25 *November* 1909; [Text of the Mexican mining law of Nov. 25, 1909].—Zts. f. Berghecht, Vol. 53, No. 1; 1912; pp. 54-83; $1.

———. *Protest Against Lead-Zinc Tariff Reduction;* [Comparative costs in Mexico and in Joplin district, Mo.].—Mining & Engg. World, March2,1912; p. 512; 1200 w; 10c.

———. *Mexico;* [Review for 1911].—M. & S. P., Jan.6,1912, p. 91; 2500 w*; 35c.

———. *Review of Mexican Output of Gold, Silver, Copper, Lead and Zinc.*—Mex. Mng. Jnl., Jan.,1912, p. 15; 2100 w; 35c.

———. *Tin Prospecting in Mexico;* [Durango, Zacatecas, Aguascalientes, Guanajuato].—Mex. Mng. Jnl., Feb.,1912; p. 18; 750 w; 25c.

CHIHUAHUA

Boddington, H. D.—*Mineral Districts of Ravon.*—Mex. Mng. Jnl., Feb.,1912; p. 19; 1800 w*; 25c. Abstract in Mines & Minerals, May, p. 605; 1000 w*; 35c.

Conklin, H. R.—*Electric Furnace at Lluvia de Oro;* [for melting cyanide precipitate].—E. & M. J., June15,1912; p. 1189; 4000 w*; 35c.

Foster, D. F.—*Re-Precipitation;* [Experiences with Parral and Ashanti tailings].—Mng. Mag., Jan.,1912, p. 56; 600 w; 45c.

Pearce, W. D.—*The Cusihuiriachic District of Chihuahua, Mexico.*—Mining & Engg. World, Jan.6,1912; p. 19; 1600 w*; 10c.

———. *Rio Plata Mining Co.;* [Report for 1911].—E. & M. J., Apr.27,1912; p. 842; 500 w; 25c.

DURANGO

Alley, F. C.—*Mineral del Carmen;* [copper district, Durango].—Mex. Mng. Jnl., March,1912, p. 43; 750 w; 25c.

Coghill, W. H.—*Refractory Manganese-Silver Ores;* [Cyaniding tests on Arizona, Durango and Jalisco ores].—M. & S. P., June1,1912; p. 754; June 8; p. 794; 9000 w; 30c.

Hamm, T. C.—*Quarrying and Mining in Durango.*—U. S. Consul. Rep., March1,1912, p. 892; 400 w; 20c.

Lord, P. B. and Y. S. Bonillas.—*Algunos criaderos argentiferos de cerca de Reyes, Durango;* [The silver ore deposits of the Bonanza Mng. Co. mines and vicinity, Reyes, Durango].—Soc. Geol. Mex., Bol.; Vol. 7, No. 2; p. 149; 1200 w*; $2.

Rangel, M.—*Distribucion de minerales en el estado de Durango;* [Mineral resources of Durango; iron, tungsten, manganese, tin, antimony, mercury, sulphur, zinc, silver, gold, copper-lead, structurals].—Soc. Geol. Mex., Bol.; Vol. 7, No. 2; 1911; pp. 105-123; $2.

Roldán, L. V.—*Estudio geologico y minero de la sierra de El Oro;* [Geology of the ore deposits of the El Oro range; gold, silver, copper].—Soc. Geol. Mex., Bol.; Vol. 7, No. 2; 1911; pp. 125-134; $2.

———. *San Juan del Rio, Dgo.*—Mex. Mng. Jnl., March,1912, p. 62; 1000 w; 25c.

———. *Zur Entwickelung des Erzbergbaues in Mexico;* [Costs and practice at a copper-gold-silver mine and mill in Durango].—Erzbergbau, Apr.15,1912; p. 142; 1600 w*; 35c.

GUANAJUATO.

Brady, A. C.—*Mining at Guanajuato in* 1911.—E. & M. J., Jan.6.1912, p. 80; 1200 w; 25c.

Workman, C. W.—*Some Features of Mining in Mexico.*—See Jalisco.

GUERRERO

Bowen, J. D.—*A Trip Down the Rio Balsas.*—Mex. Mng. Jnl., Apr.,1912; p. 25; 2200 w*; 25c.

Marshall, T. R.—*Operations of the Taxco Mines of Mexico, Ltd.*—Mining & Engg. World, Jan.13,1912; p. 72; 2000 w; 10c.

———. *Guano Deposits of Mexican West Coast.*—U. S. Consul Rep., Dec.16, 1911, p. 1387; 200 w; 10c.

HIDALGO

Denny, G. A.—*Cyanidation vs. Concentration* [on Pachuca ores].—Mng. Mag., Dec., 1911, p. 433; 750 w; 35c.

Girault, E.—*The "Purisima Grande" Cyanide Mill in Pachuca* [In Spanish and in English].—Mex. Instn. of Mng. & Met'l'gy, Trans; Vol. II, No. 6; 1912; pp. 205-213*; 75c. Abstract in M. & S. P., March23, 1912, p. 433; 1500 w; 20c. Also in Mng. Sci., Apr.4, p. 314; 1400 w; 20c.

Gonzalez, F., A. Grothe, and L. Salazar. —*The Mining Industry of Mexico; No.* 2:

State of Hidalgo, Part 2 [Mines and geology; silver-gold-lead; opal, coal, grahamite, iron, zinc, etc.].—Mexico City, 1911; 108 pp*; $1.50.

———. *Mineral del Chico, Hgo.*—Mex. Mng. Jnl., March,1912, p. 61; 1000 w; 25c.

JALISCO.

Brady, A. C.—*Mining in Jalisco in* 1911.—E. & M. J., Jan.13,1912, p. 125; 1300 w; 25c.

Capilla, A.—*Deposito de antiguos aluviones argentiferous en el rio de Santiago, Jalisco;* [Some silver placer deposits, Santiago river, Jalisco].—Soc. Geol. Mex., Bol.; Vol. 7, No. 2, p. 135-139; 2000 w; $2.

Coghill, W. H.—*Refractory Manganese-Silver Ores.*—See Durango.

Workman, C. W.—*Some Features of Mining in Mexico;* [Silver mining and metallurgic practice, past and present ,in Guanajuato and in Etzatlan district, Jalisco].—Canadian Mng. Jnl., May1,1912; p. 305; 3200 w; 25c.

———. *Work of the Amparo Mining Co.;* [Silver-gold; abstract of report for 1911].—M. & S. P., June8,1912; p. 793; p. 792; 1000 w; tables; 20c.

LOWER CALIFORNIA

———. *El Boleo Smelting Practice.*—M. & S. P., May18,1912; p. 700; p. 685; 1800 w; 20c.

MEXICO (State).

Bayliss, R. T.—*Conditions at El Oro.*—E. & M. J., Jan.20,1912, p. 163; 1500 w; 25c.

Scaife, H. L.—*Zacualpan;* [The ancient gold-silver mines of the Zacualpan district, state of Mexico].—Mex. Inst. Mng. & Met'gy, Trans. Vol. 2, No. 5; p. 164; 1500 w; 65c.

MacCoy, F.—*El Oro District in* 1911.—E. & M. J., Jan.6,1912, p. 81; 400 w; 25c.

OAXACA.

Bonillas, Y. S.—*Reconocimiento de algunos criaderos de fierro del Estado de Oaxaca;* [Geologic reconnaissance of some iron-ore deposits in western Oaxaca, Mex. Inst. Geol. Mex., Parergones, Vol. 3, No. 9; 1911; pp. 501-544*; $1.

———. *A New Hydro-electric Plant in the State of Oaxaca;* [Cia. Minera de Natividad & Anexas plant].—Mex. Mng. Jnl., June,1912; p. 44; 1000 w*; 25c.

———. *Mining in Oaxaca in* 1911; [Gold, silver, copper].—E. & M. J., Jan.6, 1912, p. 79; 1000 w; 25c.

———. *Taviche;* [Silver-gold district, southern Oaxaca].—M. & S. P., March30, 1912; p. 474; 700 w; 20c.

———. *The Smelting of Lead for Bullion;* [Magdalena district, Oaxaca].—Los Angeles Mng. Rev., Jan.13,1912, p. 8; 1200 w; 20c.

PUEBLA

de Escudero, J. F.—*La mineria en el estado de Puebla;* [Mines and minerals of the state of Puebla; from Camara Min. Mex., Bol.].—Econom. Mex., Jan.6,1912, p. 275; 2000 w; 35c.

SAN LUIS POTOSI

Bonney, W. L.—*Sulfur Mines in Mexico;* [Cerritos].—U. S. Consul. Rep., Jan.23,1912, p. 377; 300 w; 20c. Reprinted in Mex. Mng. Jnl., Apr.,1912; p. 33; 300 w; 25c. Also in Mining & Engg. World, Apr.27, p. 912; 300 w; 10c.

Bonney, W. L.—*Salt Springs at Salinas, San Luis Potosi.*—U. S. Consul. Rep., Aug.16,1911, p. 721; 800 w; 10c. Reprint in E. & M. J., Nov.11, p. 957; 25c. Also in Mex. Mng. Jnl., Jan.,1912, p. 25; 25c.

SINALOA

Sheldon, G. L.—*The Mocorito District in Sinaloa;* [Silver-gold].—E. & M. J., Junel, 1912; p. 1092; 700 w; 25c.

Sheldon, G. L.—*The Sinaloa Mining District, Sinaloa, Mex.;* [Silver, lead, gold].—M. & S. P., Dec.23,1911, p. 803; 1000 w*; 20c.

———. *Mines in Northern Sinaloa.*—M. & S. P., Apr.27,1912; p. 591; 500 w*; 25c.

———. *The Choix District of Sinaloa.*—Mex. Mng. Jnl., Jan.,1912, p. 37; 1000 w; 25c.

———. *The Sinaloa Mining District.*—El Paso Mng. Jnl., Apr.,1912; p. 23; 1200 w; 35c.

SONORA

Bonillas, Y. S.—*Algunos datos geologicos sobre el mineral "La Campana";* [Geologic notes on the "La Campana" mine, Altar district, Sonora].—Soc. Geol. Mex., Bol.; Vol. 7, No. 2; pp. 155-168*; $2.

Dufourcq, Edw. L.—*Chispas Cyanide Plant, Arizpe, Sonora.*—Columbia Univ. School of Mines Quar'ly, Nov.,1911, p. 18-30*; 65c.

Abstract in Mining & Engg. World, Jan. 20,1912, p. 113; 4500 w; 10c. Also in E. & M. J., Jan.27, p. 215; 4500 w*; 25c. Also in Mex. Mng. Jnl., Feb., p. 27; 4800 w*; 25c.

Dye, A. V.—*Bat Guano in Mexico.*—U. S. Consul. Rep., Feb.17,1912; p. 735; 200 w; 20c.

Elsing, M. J.—*Handling Furnace Charges at Cananea.*—M. & S. P., May4,1912; p. 619; 1800 w*; 20c.

Hafer, C.—*The Mines of the Sonora Valley;* [Gold, lead, copper].—Mining & Engg. World, Apr.27,1912; p. 903; 2200 w*; 10c. Reprint in Los Angeles Mng. Rev., May4, p. 5; 20c.

Holt, E. B.—*The Noria District.*—Mex. Mng. Jnl., Feb.,1912; p. 31; 2500 w*; 25c.

Hynes, D. P.—*Geology of the Mina Mexico Mine;* [Argentiferous copper, Sahuaripa district].—Econ. Geol'y, April-May,1912; p. 280-286*; 65c.

Lakes, H.—*Prospecting Conditions Found in Portions of Sonora;* [West coast gold and silver belts].—Mining & Engg. World, Jan. 13,1912; p. 110; 1500 w; 10c.

Malcolmson, J. W. and L. R. Budrow.—*Preliminary Handling of Ore at El Tigre.*—M. & S. P., March16,1912, p. 398; 1000 w*; 20c.

Merrill, F. J. H.—*Dry Placers of Sonora.*—Los Angeles Mng. Rev., March2,1912; p. 7; 1200 w*; 20c.

Sheldon, G. L.—*The Alamos District, Sonora;* [Copper, gold, silver-lead].—M. & S. P., Feb.3,1912; p. 208; 2500 w*; 20c.

Tellam, Alfr.—*Concentration Analysis from Cananea Practice;* [Practice, flow sheet and costs at Can. Cons. Copper Co. Mill No. 2].—Mng. Mag., Apr.,1912; p. 272; 3000 w*; 45c.

Tovote, W. L.—*Types of Porphyry Copper deposits.*—See under Arizona (U. S.).

———. *Notes on the Nacozari Region.*—Mex. Mng. Jnl., Jan.,1912, p. 25; 1000 w; 25c.

TAMAULIPAS-VERA CRUZ

Hornaday, W. D.—*Oil Fields of Mexico;* [Reviews recent development in Tampico field].—El Paso Mng. Jnl., Jan.,1911 [1912]; p. 14; 1300 w; 35c. Mining & Engg. World, Dec.23,1911, p. 1279; 1500 w; 10c.

Miller, C. A.—*Mexican Crude-Oil Shipments in* 1911.—U. S. Consul. Rep., Feb.14, 1912; p. 685; 250 w; 20c.

Spellacy, M. A.—*Resume of Operations* [in Tampico oil field].—Oil & Gas Jnl., Jan. 4,1912, p. 14; 2000 w; 20c.

———. *Las companias "Mexicana de Petroleo" y "Huasteca Petroleum Co.";* [The "Mexicana de Petroleo" and "Huasteca Petroleum Co."].—Econom. Mex., May 11,1912; p. 101; 2000 w; 35c.

———. *Les gisements pétrolifères de la Huasteca;* [The Tamaulipas-Vera Cruz oil fields; from French consular report].—Pétrole, Dec.15,1911, p. 4; 500 w; 35c.

———. *Long-Lived Wells;* [Prospects for continuous production from Mexican oil fields].—Los Angeles Mng. Rev., Dec.23, 1911, p. 11; 1000 w*; 20c.

———. *Oil Operations near Tampico.*—Oil Age, May30,1912; p. 10; 750 w; 20c.

———. *Von der Petroleumindustrie Mexikos* [The Mexican oil industry].—Petroleum, Apr.17,1912; p. 781; 1200 w; 50c.

TEPIC

———. *Industries in the Territory of Tepic.*—El Paso Mng. Jnl., Apr.,1912; p. 20; 3000 w; 35c.

———. *Mines of Tepic.*—El Paso Mng. Jnl., Feb.,1912; p. 15; 1000 w; 25c.

ZACATECAS

Bergeat, Alfr.—*La granodiorita de Concepcion del Oro en el Estado de Zacatecas y sus formaciones de contacto;* [The granodiorites of Concepcion del Oro, Zacatecas, and geology of the contact ore deposits; metasomatic chalcopyrite at contact, copper vein in granodiorite; lead-zinc-silver in limestone; auriferous quartz veins].—Inst. Geol. Mex., Bol. 27; 1911; 109 pp*; $1.

Central America

Akin, A. D.—*Mineral Resources of Honduras.*—Mining & Engg. World, Apr.20, 1912; p. 865; 3200 w; 10c.

Carter, T. L.—*Nicaragua and its Possibilities;* [Brief summary].—M. & S. P., March23,1912; p. 443; 500 w; 20c.

Carter, T. L.—*Central American Mines in* 1911; [Nicaragua, Honduras, Guatemala; chiefly gold-silver].—M. & S. P., Jan.6,1912, p. 60; 2000 w; 35c.

Carter, T. L.—*Nicaragua in* 1911.—E. & M. J., Jan.6,1912, p. 81; 750 w; 25c.

Haeberle, A. T.—*Mines and Minerals of Honduras.*—U. S. Consul. Rep., March22, 1912; p. 1171; 2000 w; 20c. Abstract in Los Angeles Mng. Rev., Apr.6, p. 14; 2000 w; 20c. Also in Mex. Mng. Jnl., June, p. 31; 2500 w; 25c.

Haeberle, A. T.—*A Visit to the Department of Olancho.*—Pan-Amer. Union, Bull., May,1912; p. 588-606*; 35c.

Haeberle, A. T.—*An Undeveloped Section of Honduras;* [Olancho dept.].—U. S. Consul. Rep., March28,1912; p. 1249; 3000 w; 20c.

Hershey, O. H.—*Geology of the Pis Pis Mining District in Nicaragua.*—M. & S. P., Feb.17,1912; p. 270; 3500 w*; 20c.

Kaeding, H. B.—*Eastern Nicaragua from the Mine Owner's Viewpoint.*—Mex. Mng. 1911, p. 1029; 1800 w; $1.15. Abstract in Mng. Sci., Feb.1,1912; p. 126; 1800 w; 20c. Abstract in Mng. Sci., Feb.1,1912, p. 126; 1800 w; 20c.

Kaeding, H. B.—*Treatment of Nicaraguan Gold Ores;* [Costs in Pis Pis district].—Amer. Inst. Mng. Engrs., Bull. 60, Dec., 1911, p. 1029; 1800 w; $1.15.

MacDonald, D. F.—*Heating of Local Areas of Ground in the Culebra Cut;* [Abstract from "Science"].—Engg. Record, May25,1912; p. 584; 1500 w; 25c.

Perry, E. W.—*Transportation Development and Projects in Honduras.*—Engg. Mag., March,1912; pp. 903-915*; 35c.

Shaw, S. F.—*Mine Sampling;* [System at Montezuma gold mines, Costa Rica].—Mng. Mag., Dec.,1911, p. 457; 1000 w*; 35c.

Toula, Fr.—*Die jungtertiäre Fauna von Gatun am Panamakanal;* [The younger Tertiary fossil fauna from Gatun, Panama].—Oestr-Ungarn. KK. Geol. Reichsanst., Jahrb., Vol. 61, Nos. 3 and 4; 1912; p. 487-530*; $2.

Toula, Fr.—*Nachträge zur jungtertiären (Pliocänen)* Fauna von Tehuantepec; [Supplementary notes on the Pliocene fauna of Tehuantepec].—The same, pp. 473-486*; $2.

New York & Honduras Rosario Mng. Co. —*Abstract of Annual Report for Year Ending Sept.* 30, 1911.—Mining & Engg. World, Feb.17,1912; p. 399; 1000 w; 10c.

———. *Central American Operations;* [Review of 1911 in Salvador, Costa Rica, Honduras, Panama].—E. & M. J., Jan.6, 1912, p. 82; 1000 w; 25c.

———. *Mining in Panama;* [Gold; copper].—Peru Today, Oct.,1911, p. 51; 500 w; 25c. Reprint in Mining & Engg. World, Dec.23,1911, p. 1270; 10c.

———. *The U. S. and British Interests in Central America;* [Political relations, especially in Honduras].—S. Amer. Jnl., Jan. 27,1912; p. 102; 2000 w; 35c.

Cuba

Gayley, Jas.—*The Sintering of Fine Iron-Bearing Materials;* [Dwight-Lloyd system on Cuban and other ores and flue dusts].—Amer. Inst. of Mng. Engrs., Bull. 56, Aug., 1911; p. 631; 3000 w*; $1.15.

Abstract in E. & M. J., July15,1911; p. 115; 200 w; 25c. Also in Iron Age, Aug.24, p. 422; Jan.4,1912; p. 73; 4500 w*; 50c. Also in Iron Trade Rev., Aug.24,1911; p. 336; 3000 w*; 20c. Also in Iron & Coal Trades Rev., Sept.1,1911; p. 313; 3000 w; 30c. Also in Mines & Minerals, Apr.,1912; p. 559; 1900 w*; 35c.

Guardiola, R.—*Sobre el origin de los criaderos de Mayari;* [Genesis of the iron ores of Mayari, Cuba].—Rev. Minera, Jan. 16,1912; p. 25; March1, p. 103; 4500 w; 50c.

Kindelan, V.—*Mas sobre la formacion de los criaderos de hierro de Mayari;* [Genesis of the Mayari iron ore deposits, Cuba].—Rev. Minera, Feb.24,1912, p. 94; 1200 w; 35c.

Leith, C. K.—*Las Minas de Mayari;* [The iron ores and mines of Mayari, Cuba].—Ingeniería (Madrid), Nov.30,1911, p. 392; 4500 w; 45c.

Nicholson, H. H.—*Cuba as a Mining Country;* [General conditions and mines and resources in chiefly iron, copper and manganese; also lead-zinc, gold, oil and bitumens, lime and cement].—Mex. Mng. Jnl., June,1912; p. 21; 5000 w; 25c.

Wright, I. A.—*The Nipe Bay Country, III*: [Describes workings of Spanish American Iron Co.].—Pan-Amer. Union, Bull; April,1912; pp. 471-479*; 35c.

———. *Imports of Foreign Iron Ore in* 1911; [Cuban ores into the U. S.].—Iron Trade Rev., Feb.1,1912, p. 285; 3000 w*; 20c.

———. *Station d'embarquement des minerais de fer de la Ponupo Manganese Co à Nima-Nima, Cuba;* [Cantilever-crane shiploading equipmnt at Nima-Nima iron mines near Santiago, Cuba].—Génie Civil, Feb.10,1912; p. 293; 500 w*; 50c.

———. *The Mining of Cuban Iron Ores;* [Illustrates equipment at Mayari].—Iron Age, Jan.18,1912, p. 205-207; 500 w*; 30c.

West Indies

Arnold, R.—*A Petroleum Gas Volcano;* [Upheaval of island near Trinidad oil fields].—Petroleum World, March,1912; p. 129; 1000 w*; 35c.
German abstract in Organ d. Bohrtechniker, May1, p. 106; 500 w; 35c.

Garrett, F. C.—*An Examination of some Bituminous Minerals;* [Chiefly Trinidad petroleum and pitches].—Soc. of Chem'l Ind'y, Jnl.; Apr.15,1912; p. 314; 2500 w; tables; 65c.

Graefe, Edm.—*Ueber die Gewinnung des Trinidadasphalts;* [Methods of extraction of asphalt in Trinidad].—Chem. Industrie, March15,1912; p. 175; 1600 w*; 50c.

Guermonprez, —. *Les phosphates des Antilles néerlandaises;* [Phosphate deposits of the Dutch West Indies].—Echo d. Mines, Jan.18,1912; p. 78; 300 w; 35c.

Kirschbraun, L.—*Asphalts; Sources of Supply and Methods of Preparation.*—See under Utah.

Wallace, T. A.—*Connetable Phosphate;* [Aluminum phosphate workings of Connetable and Redondo I'ds., W. Indies].—Amer. Fertilizer, Apr.20,1912; p. 64; 500 w; 25c.

———. *Caribbean Guano Enterprise;* [Caribbean Guano Co., on islands south of Jamaica].—U. S. Consul. Rep., March4, 1912; p. 928; 150 w; 20c.

———. *Eruptivbrunnen auf den Erdölfeldern von Trinidad;* [Gushers of Trinidad oil fields; from Petroleum Rev.].—Organ d. . . Bohrtechniker, Feb.1,1912; p. 31; 1000 w; 35c.

———. *Reference List for Phosphates;* [Bibliography of world's phosphate and guano deposits, etc.].—U. S., 62d Congress, 2d Session; Senate Doc. No. 190; 1912; pp. 78-106.

SOUTH AMERICA.

Schroeder, J.—*Ueber die Aussichten des Chemikers in Süd Amerika;* [The outlook for the technical chemist in South America].—Chemiker Ztg., Feb.20,1912, p. 193-195; 3000 w; 30c.

———. *South America in* 1911; [Brief summary of gold, silver, copper, nitrate, oil, tin, vanadium, platinum].—E. & M. J., Jan. 6,1912, p. 82; 2000 w; 25c.

Argentina

Gawalowski, A.—*Der Asphalt argentiner Herkunft;* [Note on a sample of asphalt from the San Juan district, Argentina].—Allgm. Oestr. Chemiker Ztg., March15. 1912; p. 47; 250; 45c.

Hermitte, E.—*La Concordia Mng. Co., Los Andes terr. ,Argentina;* [Lead-bearing silver-copper].—Mng. Jnl., Feb.24,1912; p. 201; 750 w; 35c.

Longobardi, E.—*Algunas investigaciones sobre los petróleos argentinos;* [Investigations on the physical and chemical properties and distillation products of Argentina petroleums].—Soc. Cient. Argentina, Anales; Sept.,1911; pp. 119-160; $1.15.

Longobardi, E., and N. Gamus.—*Existencia de vanadio en algunos petroleos argentinos;* [Presence of vanadium in some petroleums of Argentina].—Soc. Cient. Argentina, Anales; Dec.,1911; pp. 283-286; $1.15.

Tupper, C. A.—*Argentine Government Aerial Tram;* [Famatina copper district].—E. & M. J., March23,1912; p. 601; Apr.6, p. 693; 5000 w*; 40c.

Vatin, J. and G. Barrie.—*The Gold Mining District of Milla-Michi-Có and Malal Caballo, Neuquén, Argentina;* [Abstract from Anales del Ministerio de Agric (Geologia), Vol. 5, No. 4; 85 pp*; 1911].—Mng. Jnl.; Feb.17,1912; p. 177; 2500 w; 35c.

———. *Argentine Petroleum.*—S. Amern. Jnl., Feb.10,1912; p. 151; 1000 w; 35c.

———. *Gold Mining in Tierra del Fuego.*—Australian Mng. Standd., Feb.15,1912; p. 147; 1000 w; 35c.

———. *Note sulla esposizione di Torino;* [Notes on the Turin exposition, 1911; Metallic ores (chiefly iron) from Brazil, Argentina, Siam, Servia, Russia].—Met'l'gia Ital., Dec.,1911; pp. 796-818; 45c.

Bolivia

Adams, O. G.—*Tin Mining in Bolivia;* [Ores, methods and costs].—Australian Mng. Standd., Feb.8.1912; p. 121; Feb.15, p. 145; Feb.22, p. 170; 6000 w; 65c.

Harrison, J. W.—*The Tipuani, Bolivia, Rush.*—E. & M. J., June1,1912; p. 1069; 400 w; 25c.

Knowles, H. G. and W. H. Robertson.—*Coal in Bolivia and Peru.*—U. S. Consul, Rep., Feb.10,1912; p. 629; 500 w; 20c.

Sanjines, C.—*Mineral Resources of Bolivia;* [Chiefly gold and tin districts and mining regulations].—M. & S. P., March9, 1912, p. 376; 2200 w*; 20c.

———. *Concentrating Bolivian Tin Ores;* [Flow sheet of Llallagua mine].—Mng. Mag., March,1912; p. 208; 1000 w*; 35c.

———. *Datos para la busca del vanadium en Bolivia;* [Notes on the vanadium prospects of Bolivia].—Soc. Nac. de Mineria Chile, Bol., Aug.,1911, p.—; $1.00.

———. *Mineral Resources of Bolivia.*—S. Amer. Jnl., Dec.6,1911, p. 730; 1200 w; 35c.

———. *Produccion de Estaño en Bolivia;* [Tin production of Bolivia].—Soc. Nac. de Mineria Chile, Bol., Aug.,1911, p.—; $1.00.

Brazil

Branner, J. C.—*A Hydrocarbon Found in the Diamond and Carbonado District of Bahia, Brazil.*—Amer. Jnl. of Sci., Jan.,1912; p. 25; 500 w; 65c.

Ferraz, L. C.—*Gold Dredging in the River Coxipómirim, Matto Grosso, Brazil.*—Mng. Jnl., Apr.6,1912; p. 305; 2000 w; 35c.

Gardiner, C. Roe.—*History of the Diamond Fields of India, Brazil and S. Africa.*—Mining & Engg. World, Feb.17,1912; p. 403; March2, p. 513; 5500 w; 20c.

Karg, F.—*Die Kohle Brasiliens und ihre industrielle Verwendbarkeit;* [The coals of Brazil and their possible utility.—Kohle & Erz., May6,1912; p. 466; 1600 w; 35c.

Leith, C. K. and E. C. Harder.—*Hematite Ores of Brazil. and a Comparison with Hematite Ores of Lake Superior.*—Econ. Geol'y, Oct.-Nov.,1911, pp. 670-687; 65c.
Abstract in Iron & Coal Trades Rev., Feb.2,1912; p. 170; 5000 w*; 30c. Also in M. & S. P., Jan.27, p. 172; 1100 w*; 20c.

Moravia, —. *The Occurrence, Winning and Dressing of Monazite in Brazil;* [Translated from Minas Geraes: Escola de Minas de Ouro Preto; Annaes, No. 11, 1909].—Mng. Jnl., Apr.20,1912; p. 898; 1800 w; 35c.

———. *Note sulla esposizione di Torino;* [Notes on the Turin exposition, 1911; Metallic ores (chiefly iron) from Brazil, Argentina, Siam, Servia, Russia].—Met'l'gia Ital., Dec.,1911; pp. 796-818; 45c.

Chile

Avalos, C. G., and G. Young.—*The Iron and Steel Industry of Chile;* [Translated from Soc. Nac. de Minería, Bol., No. 176-177; 1911].—Mng. Jnl., Apr.27,1912; p. 421; 1000 w; 35c.

Gonzales, M. C.—*Development at Collahuasi.*—E. & M. J., Apr.20,1912; p. 794; 350 w; 25c.

Hanna, R.—*Chilean Nitrate Industry;* 2d quarterly report of Nitrate Propaganda].—U. S. Consul. Rep., Jan.26,1912, p. 426; 600 w; 20c.

Langford, F.—Smelter Building in Chile; [Labor and political conditions affecting Braden smelter].—M. & S. P., Apr.27,1912; p. 599; 1000 w*; 20c.

Martell, P.—*Die Salpeterindustrie in Chile;* [The saltpetre industry of Chile].—Zts. f. Sprengstoffwesen, May15,1912; p. 193; 1800 w; 35c.

Newsom, J. F.—*Chilean Nitrate Deposits.*—Mng. & Met'g'l Soc. of Amer., Bull. 46; March30,1912; p. 56-68; 50c. Abstract in Cheml. Engr., Apr., p. 167; 2400 w; 35c.

Ossa, I. D.—*Direct Smelting of Silver-Copper Ores* [Cristobal Colon, Chile; from Soc. Nac. Mineria, Chile, and London Mng. Jnl.].—Mex. Mng. Jnl., Jan.,1912, p. 36; 1000 w; 25c.

Ossa, I. D.—*El Mineral de "El Teniente";* [The "El Teniente" copper mine and district].—Soc. Nac. Mineria (Chile), Bol.; Jan.,1912; 4 pp.; $1.15.

Schmidt, Otto—*A Carboniferous Corner of Chile;* [Lebu coal fields].—Mine & Quarry, March,1912; p. 586; 1500 w*; 25c.

Tovote, W. L.—*Types of Porphyry Copper Deposits.*—See under Arizona (U. S.).

Winslow, A. A.—*Chilean Production of Nitrate;* [Figures for 1911].—U. S. Consul. Rep., Apr.3,1912; p. 39; 200 w; 10c.

Zelaya, C.—*Petroleum Deposits in Chile.*—E. & M. J., Apr.13,1912; p. 756; 1000 w; 25c. Reprint in Oil Age, May17, p. 6; 20c.

W. Montgomery & Co.—*Nitrate Industry in* 1911.—Mng. Jnl., Jan.6.1912, p. 31; 1000 w; 35c. Also in S. Amer. Jnl., Jan.6, p. 14; 2200 w; 35c.

———. *Gold Mining in Tierra del Fuego.*—Australian Mng. Standd., Feb.15,1912; p. 147; 1000 w; 35c.

———. *Putu Placers.*—M. & S. P., Feb. 17,1912; p. 273; 800 w*; 20c.

———. [*Series of Analyses of Chile Nitrate Companies;* New Paccha & Jaspampa and the Santiago; the Angela].—S. Amer. Jnl., Jan.6,1912; Jan.20, p. 63; 3600 w; 35c.

———. [*Series of Analyses of Chile Nitrate Companies;* Anglo-Chilian; Colorado; Santa Rita; New Tamarugal Co.'s].—S. Amer. Jnl., Dec.9,1911, p. 687; Dec.16, p. 718; 5000 w; 50c.

———. *The Great Nitrate Fields of Chile;* [Abstract from Bur. of Amer. Republics publication].—Mex. Mng. Jnl., Jan., 1912, p. 35; 2400 w; 25c.

Colombia

Johnson, R. D. O.—*Flume Construction in Colombia.*—E. & M. J., March30,1912; p. 649; 1600 w*; 25c.

Plotts, Wm.—*Characteristics of Oil Territory in Colombia.*—Oil Age, Apr.19,1912; p. 1; 2100 w; 20c.
German abstract in Allgm. Oestr. Chemiker Ztg., July16, p. 109; 1400 w; 45c.

Olden, Chas.—*Emeralds: Their Mode of Occurrence and Methods of Mining and Extraction in British Colombia.*—Instn. of Mng. & Met'l'gy, Bull. 87, Dec.,1911, p. 1-11; 5000 w*; 50c. Abstract in Mng. Jnl., Dec.30, p. 1299; Jan.13, p. 57; 4500 w; 50c. Discussion, Bull. 88, Jan.,1912, pp. 3-11.
Also abstracted in Engg. News, Feb.15, 1912; p. 295; 1000 w; 25c.

Perry, R. W.—*Cyaniding Tailings in Colombia;* [Santa Rosa de Osos district, Antioquia].—E. & M. J., March9,1912, p. 498; 2500 w*; 25c.

Pryor, T.—*Makeshifts in Mining;* [Gold mines near Popoyan, Colombia; wax candles, home-made belting, etc.].—Mng. Mag., March,1912; p. 204; 1000 w*; 35c.

Sundt, Lorenzo.—*El origen del Salitre en Chile;* [Origin of the sodium nitrate and saline deposits of Chile].—Soc. Nac. Mineria (Chile), Bol.; Feb.,1912; 3 pp.; $1.15.

Tirado, E. R.—*Minas de Colombia;* [Mining in Columbia; general notes on emeralds, platinum and tin fields].—Mex. Mng. Jnl., Feb.,1912; p. 60; 600 w; 25c.

———. *Colombian Platinum.*—Mng. Jnl., Apr.20,1912; p. 373; May18, p. 477; 2500 w; 50c.

———. *Colombia in* 1911; [Gold fields].—Mng. Jnl., Jan.6,1912, p. 26; 1000 w; 35c.

———. *Dredging at Pato.*—M. & S. P., May4,1912; p. 629; 800 w*; 20c.

Ecuador

Baragwanath, J. G.—*Notes on the Geology of the Zaruma Mines, Ecuador* [Gold].—Columbia School of Mines Quar'ly; Jan., 1912; p. 160; 1500 w*; 65c.
Abstract in Mng. Sci., May2,1912; p. 389; 1500 w*; 20c.

Guiana.

Percival, G. B.—*Prospecting for Gold in the Jungles of Surinam.*—Mining & Engg. World, March9,1912; p. 555; 1500 w*; 10c.

Redepenning, —. *Beiträge zur Kenntnis einiger wichtiger Goldvorkommen in Amerika;* [Some of the more important gold deposits of America; Alaska; French Guiana dredging].—Zts. f. d. Berg-, H-, & Salinenwesen, Vol. 59, No. 5, 1911; pp. 695-707; $1.15.

Verloop, J. H.—*The Surinam Gold Industry.*—Amsterdam, 1911; 106 pp*; (book).

Commissioner of Lands & Mines.—*Gold and Diamond Industries of British Guiana.*—Georgetown, B. G.; 1911; 15 pp.; 75c.

———. *Venezuela of Today;* [Caratal or

Nueva Providencia and other gold fields in Venezuelan Guiana].—Mng. Jnl., May18, 1912; p. 479; 2000 w*; 35c.

Peru

Deustua, R. A.—*Estado actual i porvenir de la industria petrolífera en el Perú;* [Present status and future outlook for the petroleum industry of Peru].—Soc. d. Ingrs. (Peru), Bol.; Feb.,1912; pp. 57-90; March, pp. 109-132; April, pp. —; May, pp. 195-218*; $2.25.
Resumé in English in "Peru To-Day," April,1912; p. 25; 3200 w*; 25c.

Dunstan, G.—*Notas sobre la región carbonífera de Oyon;* [The coals and coal fields of Oyon, Cajatambo, Dept. of Ancachs, Peru].—Soc. Ingrs., Peru, Bol., Sept.-Oct., 1911, p. 395-401; 5000 w; 45c.

Knowles, H. G. and W. H. Robertson,—*Coal in Bolivia and Peru.*—U. S. Consul. Rep., Feb.10,1912; p. 629; 500 w; 20c.

Lukis, E.du B.—*The Quiruvilca Railroad;* [With notes on anthracite resources; also silver copper].—Peru To-day, Feb.,1912; p. 31; 2100 w*; 35c.

———. *Aporoma Goldfields Co., Ltd.;* [Peruvian placer fields].—Mng. World (London), Apr.13,1912; p. 459; 1500 w; 35c.

———. *Guano Export aus Peru;* [Peruvian guano exports, 1905-1910].—Zentralbl. f. Kunstdünger-Ind., Jan.7,1912, p. 51; 300 w; 35c.

———. *Die Minen-Industrie Perus;* [The mining industry of Peru; silver, copper, gold, tungsten, bismuth, lead, tin, borax, vanadium].—Erzbergbau, Feb.15,1912, p. 54; 3500 w; 35c.

———. *La industria minera en el Cerro de Pasco;* [The Cerro de Pasco mines].—Mex. Mng. Jnl., Jan.,1912, p. 58; 2400 w; 25c.

———. *Mines, Minerals and Mining Laws of Peru;* [From "Peru Today"].—Mining & Engg. World, March9,1912; p. 563; 2500 w; 10c.

———. *Peruvian Oil Fuel in Chile.*—Peru Today, April,1912; p. 45; 500 w; 25c.

———. *Peruvian Guano.*—Peru Today, March,1912; p. 33; 1000 w*; 25c.

———. *Proyecto de ley de enganche minero;* [Proposed legislation governing miners' employment agencies in Peru].—Soc. d. Ingrs. (Peru), Bol.; Feb.,1912; p. 91-101; 75c.

Venezuela

Henderson, W.—*Gold Discoveries in Venezuela.*—U. S. Consul Rep., May25,1912; p. 790; 600 w; 20c.

———. *Magnesite Deposits in Venezuela.*—E. & M. J., Apr.20,1912; p. 794; 200 w; 25c.

———. *Venezuela of Today;* [Caratal or Nueva Providencia and other gold fields in Venezuelan Guiana].—Mng. Jnl., May18, 1912; p. 479; 2000 w*; 35c.

———. *What Is Asphalt?;* [Describes Bermudez deposits, and industrial uses].—Pan-American Union, Bull.; March,1912; p. 328-343*; 35c.

AFRICA.

Deutsche Kolonial Ges.—*Verhandlungen der Kolonial-Technischen Kommission des Kolonial-Wirtschaftlichen Komitees E. V., wirtschaftlicher Ausschuss der Deu. Kolonial Ges;* [Transactions of the German Colonial Society, technical and industrial committee, 1911, No. 2].—Berlin,1911; pp. 70*; map of Kamerun; (book).

Liesegang, C. — *Das Bergrecht der deutscher Schutzgebiete;* [Principles of the mining law of German Africa and the German possessions].—Techn. Blätter, March 23,1912; p. 89; March30, p. 100; Apr.5, p. 108; 10,000 w; 65c.

Ritter, K.—*Das koloniale Bergrecht;* [Mining law of the German colonies].—Nürnberg and Leipzig, 1911; pp. —; (book).

———. *Der Bergbau in den deutschen Schutzgebieten im Jahre* 1910-1911; [Review of mining in German Africa in 1910-1911].—Glückauf, Feb.24,1912, p. 303; 2000 w; 45c. Also in Erzbergbau, Apr.1, p. 127; 1500 w; 35c. Also in Bergwirtsch. Mittlngn., Apr.,1912; p. 66; 2500 w; $1.
English abstract in Mng. Jnl., Apr.27, p. 407; 1000 w; 35c.

British South Africa

Brown, A. S., and G. G.—*The Guide to South and East Africa;* [Annual of Union Castle Mail Steamship Co., 1911-1912].—London, 1912; pp. xliv, 492; (book).

Doman, W. A.—*The Great Diamond Mines of South Africa.*—Afr. World Annual, Dec.,1911; p. 317-323*; 3600 w*; $1.50.

Gardiner, C. Roe.—*History of the Diamond Fields of India, Brazil and S. Africa.*—Mining & Engg. World, Feb.17,1912; p. 403; March2, p. 513; 5500 w; 20c.

Gascoyne, R.—*Review of Mining in Foreign Countries in* 1911; *South Africa.*—Mining & Engg. World, Jan.27,1912; p. 270; 7000 w; 25c.

Kunz, Geo. F.—*Precious Stones in* 1911.—E. & M. J., Jan.6,1912, p. 5; 1500 w; 25c.

Kynaston, H.—*Building Stone in S. Africa;* [Sandstones and granite, chiefly from Orange Free State quarries; abstract from report of Geol. Survey f. 1910].—Stone Trades Jnl., Feb.,1912; p. 1046; 1200 w; 35c.

Spencer, L. F.—*The Larger Diamonds of S. Africa.*—Mineralogical Mag., Oct.,1911, p. —; 500 w; table; 65c.
Italian abstract in Rassegna Mineraria, Dec.21,1911, p. 293; 500 w; table; 35c.

———. *Diamond Mining in S. Africa;* [Review for 2d half-year 1911].—S. Afr. Engg., Jan.,1912; p. 3.; 1500 w*; 35c.

———. *South Africa;* [Review of report of Pretoria Bureau of Mines for last semester 1910].—Mng. Jnl., Feb.24,1912; p. 181; 1800 w; 35c.

———. *The South African Coal Output;* [Monthly by companies, Feb.,1911-1912].—S. Africa, March16,1912; p. 580; 1000 w; table; 35c.

CAPE COLONY

Du Toit, A. L.—*The Copper-Nickel Deposits of the Insizwa, East Griqualand;* [Abstract from report to Cape Geol. Commission].—S. Afr. Mng. Jnl., March9,1912; p. 19; 2000 w; 35c.

Rogers, A. W.—*Coal Problem in the Karroo;* [Fissure-vein deposits of coal in Nieuweveld region; abstract from report of Cape Geol. Commission].—S. Afr. Mng. Jnl., March16,1912; p. 51; 1500 w; 35c.

———. *Mining in Cape Colony;* [Review of diamond diggings and mines in 1910].—S. Afr. Mng. Jnl., Dec.2,1911, p. 455; Dec. 9, p. —; 2800 w; 50c.

NATAL

Steart, F. A.—*The Klip River Coalfield, Natal;* [From report of Inspector of Mines f. 1910].—S. Afr. Engg., Jan.,1912; p. 1; 1200 k*; 35c.

Swinburne, U. P.—*Natal Mining Development;* [Review of official report for 1910].—S. Afr. Mng. Jnl., Dec.23,1911, p. 569; Dec.30, p. 603; 4200 w; 50c.

———. *Coal Mining in Natal;* [Review of official report for 1910].—S. Afr. Engg., Dec.,1911, p. 101; 1400 w; 35c.

———. *Kolmanskop Diamond Mines;* [Report for 1911].—S. Afr. Mng. Jnl., Apr. 27,1912; p. 317; 3000 w; 35c.

———. *Mining in Natal in* 1910; [Gold, copper, tin, graphite, iron, asbestos, coal, etc.; from official report].—S. Afr. Engg., Jan.,1912; p. 16; Feb., p. —; 3000 w; 50c.

———. *Natal's Iron Deposits.*—Afr. World, Feb.10,1912; p. 18; 1200 w; 35c.

ORANGE FREE STATE

Andrews, H. O.—*The Orange Free State Today.*—Afr. World Annual, Dec.,1911, p. 307-311*; $1.50.

Cheml., Met. & Mng. Soc. of S. Afr.—*Visit to Coalbrook Colliery.*—C. M. & M. Soc., Jnl; March,1912; p. 372; 1600 w*; 90c. Also in S. Afr. Engg., May, p. 77; 1600 w*; 35c.

Noth, Jul.—*Petroleum Vorkommen in Südafrika; Erdgas und Erdöl in Siebenburgen;* [Petroleum in Fixburg district, north of Basutaland, S. Afr.; Natural Gas and petroleum in Transylvania; abstracts of two papers read to Kgl. Ungar. Geol. Ges., March6,1912].—Organ d. Bohrtechniker, Apr.1,1912; p. 73; 1500 w; 35c.

———. *The Venterskroon Gold Field;* [Discusses failure].—S. Afr. Mng. Jnl., Feb.3,1912; p. 786; 600 w; 35c.

RHODESIA.

Davey, W. H.—*Rhodesian Copper; Shamva and Susanna Gold Mines.*—Afr. World, June8,1912; p. 261; 1500 w; 35c.

Davey, W. H.—*Rhodesian Mining Industry in* 1911.—Afr. World, Dec.20,1911; p. 427-444*; $1.50.

Marriott, H. F.—*Mining in Rhodesia in* 1911; [Chiefly gold; also copper, silver, coal].—E. & M. J., Jan.6,1912, p. 86; 1000 w; 25c.

Rubischaum, T.—*Rhodesian Mining;* [Review of profitableness].—Mng. Mag., Feb., 1912; p. 121; 1000 w; 45c.

Shaw, D. N.—*The Position in Rhodesia Today;* [Effect of Wankie coal on development].—Afr. World Annual, Dec.,1911, p. 275; 1500 w; $1.50.

Rhodesia Chamber of Mines, Incorp.—*Output of Gold and Other Metals, and of Coal;* [November; December; January; February; March; April; May; June; also silver-lead, chrome iron, asbestos].—Bulawayo, 1912; 5 tables (each month); 50c (each).

Rhodesia Chamber of Mines, Incorp.—*Report of the Executive Committee for the Year Ended Dec.* 31, 1911.—Bulawayo; 1912; 17 pp.; 50c.

Abstract, Progress of Mining in Rhodesia in 1911; in S. Afr. Engg., May,1912; p. 83; 2000 w; 35c.

———. *Der Bergbau Südrhodesiens im Jahre,* 1910; [Review of mines output in Southern Rhodesia, 1910; gold, silver, lead, copper, coal, chrome-iron, asbestos].—Deu. Bergwerks Ztg., Apr.12,1912; p. 1; Apr.13, p. 1; 2500 w; 50c.

———. *Rhodesia;* [Present status of conditions and reviews for 1911].—Mng. Jnl., June1,1912; p. 529; 2000 w; 35c.

———. *Rhodesian Working Costs;* [From London Financial Times].—Canadian Mng. Jnl., Jan.1,1912; p. 19; 1400 w;

———. *Rhodesia in* 1911; [Gold, tin, coal].—Mng. Jnl., Jan.6,1912, p. 9; 1000 w; 35c.

———. *Southern Rhodesia Copper.*—S. Afr. Mng. Jnl., Apr.6.1912; p. 214; 1000 w; 35c.

———. *Northern Rhodesian Copper.*—S. Afr. Mng. Jnl., Apr.13,1912; p. 252; 1000 w; 35c.

———. *The Year in Rhodesia;* [Review for 1911 of developments in tin, chrome, iron, lead, gold, coal, copper].—S. Afr. Mng. Jnl., Dec.30,1911, p. 613; Jan.6,1912; p. 654; Jan.20, p. 716; 4000 w; 35c.

TRANSVAAL

(a) Gold Mines and Gold Mining

Bleloch, W. E.—*The Geology of the Rand;* [Discussion of Mellor's paper before Geol. Soc. of S. Afr.].—S. Afr. Mng. Jnl., Apr.13,1912; p. 248; May11, p. 387; 4500 w; 50c.

Chilton, Jas.—*Accidents in Transvaal Mines, with Special Reference to Falls of Ground.*—Cheml. Met. & Mng. Soc. of S. Afr., Jnl.; Nov.,1911, p. 158-166*; (Discussion), Dec., pp. 230-236; Jan., pp. 280-287; Feb., pp. 319-332; March, pp. 367-370; Apr., pp. 408-414; May, pp. 456-466; $4.50.

Abstract in S. Afr. Mng. Jnl., Nov.25, 1911, p. 410; June29,1912, p. 648; 2500 w; 50c. Also in E. & M. J., July20, p. 103; 1800 w; 25c.

Draper, D.—*The Future of the Banket Series in the Transvaal.*—S. Afr. Mng. Jnl., May4,1912; p. 354; 1000 w; 35c.

Farrar, Sir G.—*The Meeting of the East Rand Shareholders;* [Reviews of E. R. P. M. affairs].—South Africa, Dec.16,1911, p. 568; 6,000 w; Jan.20,1912, p. 126, p. 136; 1600 w; 50c. Also in Afr. World, Dec.16, p. 326; 4500 w; 35c.

Frost, A. W. H.—*Mines of the Pilgrims Rest Gold Fields; 1: Mali Dyke.*—S. Afr. Mng. Jnl., Apr.13,1912; p. 247; 1000 w; 35c.

Gascoyne, R.—*Electrical Hoisting Plants on the Rand;* [Ward-Leonard vs. 3-phase].—Mining & Engg. World, Feb.10,1912; p. 342; 3000 w; tables; 10c.

Gascoyne, R.—*Electrical Power in the Transvaal;* [Chiefly power plants and hoisting].—Cassier's Mag., Feb.,1912; p. 99-116; 6000 w*; 35c.

Gascoyne, R.—*Transvaal Gold Mining;* [Operating conditions and mining practice in 1911].—M. & S. P., Jan.6.1912, p. 63; 3200 w*; 35c. Reprinted in W. Australian Mng., etc., Jnl., March2,1912, p. 12; 35c.

Gascoyne, R.—*World's Biggest Gold Producer on the Rand.* [Randfontein Central equipment].—Mining & Engg. World, Apr.6, 1912; p. 759; 1500 w*; 10c.

Hatch, F. H.—*The Conglomerates of the Witwatersrand;* [Geology and Genesis].—"Types of Ore Deposits," by H. F. Bain, and others; 1911; pp. 202-218*.

Hoffman, J. I.—*Recent Practice in Diamond Drilling and Borehole Surveying;* [on the Rand].—Instn. of Mng. & Met'l'gy, Bull. 91; April,1912; pp. 11*; 50c (Discussion), Bull 92, May,1912, pp. 23-33; 50c.

Abstract in Coll'y Guardn., Apr.26,1912; p. 829; 4000 w*; 35c. Also in S. Afr. Engg.,

Apr., p. 61; 1800 w*; 35c. Also in S. Afr. Mng. Jnl., May4, p. 355; 3000 w; 35c. Also in Mining & Engg. World, May11, p. 1002; 4500 w*; 10c. Also in E. & M. J., May18, p. 980; 1500 w*; 50c.

Horwood, C. B.—*The Geology of the Rand;* [Read to Geol. Soc. of S. Afr.; discusses Mellor's paper].—S. Afr. Mng. Jnl., Feb.17,1912; p. 867; Feb.24, p. 903; 5000 w; 50c.

Jabavu, J. T.—*The South African Union and the Natives.*—Afr. World, Dec.20,1911; p. 297; 3000 w*; $1.50.

Key, A. Cooper.—*Two Decades of the Rand; Production and Dividends.*—Mining & Engg. World, March16,1912; p. 599; 1500 w*; 10c.

Key, A. Cooper.—*Record Sinking at State Mines;* [Southeast shaft, Modderfontein].—Mining & Engg. World, June1,1912; p. 1145; 2000 w; 10c.

Key, A. Cooper.—*The Witwatersrand Gold Fields in* 1911.—Afr. World Annual, Dec.,1911; pp. 325-426*; $1.50.

Letcher, O.—*Mining Methods and Tendencies on the Rand.*—Mining & Engg. World, June8,1912; p. 1199; 2100 w; 10c.

Letcher, O.—*Improved Working Conditions in Rand Mines;* [Dust problem].—Mining & Engg. World, Apr.6,1912; p. 762; 1200 w; 10c.

Letcher, O.—*Duration of Future Profitable Working of Rand Mines.*—Mining & Engg. World, Feb.17,1912; p. 396; 1000 w; 10c.

Letcher, O.—*The Outlying Gold Mines of the Transvaal.*—Mining & Engg. World, Jan.13,1912; p. 69; 1800 w; 10c.

Mellor, E. T.—*Bezuidenhout Valley and Reitfontein Geology;* [Key section of Lower Witwatersrand strata in central Rand region; read to Geol. Soc. of S. Africa].—S. Afr. Mng. Jnl., March30,1912; p. 157; May18, p. 415; 3600 w*; 50c. Also in S. Afr. Engg., June,1912, p. 98, 6000 w*; 35c.

Mellor, E. T.—*Geology of the Witwatersrand;* [Stratigraphic structure; read to Geol. Soc. of S. Afr.; abstract].—S. Afr. Mng. Jnl., Jan.6,1912; p. 643; Jan.13, p. 671; Jan.20, p. 709; Apr.20, p. —; Apr.27, p. 317; 1200 w*; 95c.

Rogers, A. W.—*Migration of Miners and Accidents on the Rand;* [Claims accidents increase with increased migration rate].—E. & M. J., June8,1912; p. 1141; 1200 w; 25c.

Saner, Chas. B.—*Presidential Address;* [Chiefly on progress in mining practice].—Cheml. Met. & Mng. Soc. of S. Afr., Jnl.; Feb,1912; p. 314; 4500 w; 90c.

Smith, G. H.—*Single Shift on the Rand;* [Discusses advantages and requisite modifications in practice].—Mng. Mag., Jan., 1912, p. 55; 1000 w; 45c.

Spencer, F. W.—*The Native Problem in South Africa.*—Afr. World Annual, Dec., 1911; p. 293; 2200 w; $1.50.

Stokes, R.—*The Witwatersrand and Its Mines.*—See, under W. A. Caldecott (Editor).

Struben, F. P. T.—*Who Discovered the Rand?*—S. Africa, Dec.30,1911, p. 682, p. 703; 1500 w*; 35c.

Webber, H. O'K.—*The Outlook for Rand Mining;* [Presidential address Transvaal Chamber of Mines].—S. Afr. Mng. Jnl., March2,1912; p. 935; 1500 w; 35c. Also abstracted in S. Afr. Engg., April,1912; p. 70; 2400 w; 35c.

Whitehouse, J. and W. L. Witherspoon.—*Some Aspects of Mine Ventilation and Temperature on the Witwatersrand.*—Cheml. Met. & Mng. Soc. of S. Afr., Jnl., June,1911; pp. —; July, p. 15-16; Aug., p. 48; Sept., p. 96-7; Oct., p. 126-128; Nov., p. 128-129.

Miners' Phthisis Commission (Transvaal.)—*Report and Recommendations;* [Abstract and discussion].—S. Afr. Mng. Jnl., March30,1912; p. 153; p. 135; April6, p. 210; 5000 w; 50c.

———. *Abandonment of Cyferfontein.*—S. Afr. Mng. Jnl., Dec.2,1911, p. 437; 1200 w; 35c.

———. *An Experimental Station for the Rand;* [Underground mine-dust investigation proposed].—S. Afr. Mng. Jnl., Apr.27, 1912; p. 313; 1600 w; 35c.

———. *Consolidated Langlaagte.*—S. Afr. Mng. Jnl., March9,1912; p. 5; 1500 w*; 35c.

———. *Deepest Workings of the Central Rand.*—S. Afr. Mng. Jnl., Feb.24,1912; p. 897; 1500 w; 35c.

———. *Developments on the Murchison Range;* [Leydsdorp district].—S. Afr. Mng. Jnl., May4,1912; p. 349; 750 w*; 35c.

———. *Dividends of Transvaal Mining Companies in* 1911.—Mining & Engg. World, March23,1912; p. 661; 2200 w; 10c.

———. *Dividends for* 1911; *Complete Returns, Gold, Diamonds, Coal, Tin, Etc.* [Transvaal].—S. Afr. Mng. Jnl., Jan.6,1912; p. 641; 1000 w; tables; 35c.

———. *Electrical Winding Hoists in the Transvaal;* [Ward-Leonard vs. 3-Phase system].—Australian Mng. Standd., Feb.22, 1912; p. 173; 1800 w; 35c.

———. *Electric Winding at the West Rand Consolidated Mines.*—Electrician, Jan. 1,1912, p. 557; 1000 w*; 35c.

———. *Failure of Ore Yield at East Rand Proprietary* [and Power Co. troubles on the Rand].—Mining & Engg. World, Dec.30,1911, p. 1309; 2000 w*; 10c.

———. *Geology of the Witwatersrand;* [Discussion of J. S. Olver's work].—S. Afr. Mng. Jnl., Dec.16,1911, p. 520, p. 528; Dec. 23, p. 560; 3000 w; 35c.

———. *Gloomy Outlook on the Rand;* [for 1912].—E. & M. J., Apr.20,1912; p. 795; 2100 w; 25c.

———. *Machine Drills on the Rand.*—S. Afr. Mng. Jnl., Apr.6,1912; p. 192; 1200 w; 35c.

———. *Mines of the Witwatersrand;* [Series of illustrated descriptions of individual mines and mills, appearing in South African Mining Journal. 1: City & Suburban Gold Mng. Co.; 2: Ginsberg Gold Mng Co.; 3: Cinderella Cons. Gold Mines; 4: Robinson Deep Gold Mng. Co.; 5: Luipaardsvlei Estate & Gold Mng. Co.; 6: Meyer & Charlton Gold Mng. Co.; 7: Modderfontein-B Gold Mines; 8: Knights Deep; 9: Main Reef Group; 10: Village Deep; 11: Princess Estate & G. Mng. Co.; 12: West Rand Cons. Mines; 13: Bantjes Cons. Mines; 14: Robinson G. Mng. Co.; 15: City Deep; 16: Roodepoort United Main Reef; 17: Rand Klip].—1: Nov.25,1911, p. 399; 1800 w*; 35c. 2: Dec.2, p. 435; 1800 w*; 35c. 3: Dec.9, p. 479; 2000 w*; 35c. 4: Dec.16, p. 517; 2000 w*; 35c. 5: Jan.6, 1912, p. 637; 1200 w*; 35c. 6: Jan.13, p. 675; 1500 w*; 35c. 7: Jan.27, p. 741; 3000 w*; 35c. 8: Feb.3, p. 789; 1800 w*; 35c. 9: Feb.10, p. 825; 1800 w*; 35c. 10: Feb. 17, p. 861; 1800 w*; 35c. 11: March2, p. 937; 3000 w*; 35c. 12: March9, p. 11; 2000 w*; 35c. 13: March23, p. 93; 1500 w*; 35c. 14: March30, p. 143; 1200 w*; 35c. 15: Apr.27, p. 307; 3000 w*; 35c.

16: May4, p. 347; 1500 w*; 35c. 17: June8, p. 541; 1000 w*; 35c.

———. *Prospecting on the North Rand Line;* [Skinner's reef, Witpoortje farm].—S. Afr. Mng. Jnl., Jan.27,1912; p. 739; 800 w; 35c.

———. *Rand Features and Figures in 1911;* [Statistics of costs, grades and profits].—S. Afr. Mng. Jnl., Feb.3,1912; p. 784; 500 w; table; 35c.

———. *Rand Geology;* [Reviews Mellor's and Horwood's discussion on stratigraphy and petrology of central Rand].—S. Afr. Mng. Jnl., March30,1912; p. 145; 1500 w; 35c.

———. *Rand Labor, An Urgent National Question; Working Conditions on the Witwatersrand Goldfields.* — Afr. World, Feb.24,1912; p. 128; 3000 w; 35c.

———. *Rand Mining as an Investment.*—S. Afr. Mng. Jnl., Feb.17,1912; p. 859; 1500 w; 35c.

———. *Recent Progress at Pigg's Peak.*—S. Afr. Mng. Jnl., Dec.9,1911, p. 483; 1900 w*; 35c.

———. *Shaft Sinking Progress on the Far East Rand.*—S. Afr. Mng. Jnl., May11, 1912; p. 381; 1200 w; 35c.

———. *The Cons. Langlaagte New Plant.*—S. Afr. Mng. Jnl., Apr.27,1912; p. 305; 400 w*; 35c.

———. *The East Rand Proprietary Mines, Ltd., Report.*—Mining & Engg. World, Apr. 6,1912; p. 775; 1500 w*; 10c.

———. *The East Rand Meeting, Feb.* 29, 1912.—S. Africa, March30,1912; p. 695; 10,000 w; 35c. Also in Afr. World, March 30, p. 439; 6000 w; 35c.

———. *The E. R. P. M. Scandal, and Text of Government Committee's Finding.*—Mng. Jnl., Dec.16,1911, p. 1217; 5000 w; 35c.

———. *The E. R. P. M. Developments.*—S. Afr. Mng. Jnl., Dec.16,1911, p. 515; 2000 w; 35c.

———. *The Far East Rand;* [Outlook for the future].—Mng. World (London), June1,1912; p. 696; 700 w; 35c.

———. *The Geological Problem of the West Rand.*—S. Afr. Mng. Jnl., Nov.25,1911, p. 403; 1000 w; 35c.

———. *The Geology of the Witwatersrand;* [reviews recent controversial questions].—S. Afr. Mng. Jnl., Dec.2,1911, p. 441; 2000 w*; 35c.

———. *The Rand's Ore Reserves.*—S. Afr. Mng. Jnl., April13,1912; p. 237; 1500 w; 35c. Also in Afr. World, May11, p. 18; 1500 w; 35c. Also in M. & S. P., June15, p. 833; 1000 w; tables; 20c.

———. *The Rand and California;* [Similarity of working conditions].—S. Afr. Mng. Jnl., Dec.30,1911, p. 597; 2000 w; 35c.

———. *Transvaal Gold Mines' Dividends for* 1911.—S. Afr. Mng. Jnl., Dec.23, 1912, p. 559; 1000 w; tables; 35c.

———. *Underground Reform on the Rand.*—S. Afr. Mng. Jnl., March16,1912; p. 49; 1600 w; 35c.

———. *Winders at the Rand Collieries.*—S. Afr. Mng. Jnl., Apr.27,1912; p. 310; 1000 w*; 35c.

(b) Gold Mills and Milling

Butt, T. P. E.—*The Electrification of the Randfontein Central;* [Read to S. Afr. Inst. of Engrs.; abstract].—Iron & Coal Trades Rev., Feb.2,1912; p. 173; 7000 w*; 30c

Caldecott, W. A. (Editor).—*Textbook of Rand Metallurgical Practice, Vol. I.*—London, Philadelphia, Johannesburg; 1911-12; 468 pp*; $6.50 (book).

Contains chapters by the following contributors: 1, The Witwatersrand and its Mines, by Ralph Stokes, pp. 1-20; (2) Sorting and Breaking, by J. E. Thomas, pp. 22-31*; (3) Stamp-Milling, by G. O. Smart, pp. 33-95*; (4) Tube-Milling, by W. R. Dowling, pp. 105-140*; (5) Treatment of Sand, by J. E. Thomas, pp. 150-186*; (6) Slime, by H. A. White and W. R. Dowling, pp. 189-241*; (7) Precipitation, by E. H. Johnson, pp. 245-254*; (8) Clean-Up and Smelting, by E. H. Johnson, pp. 255-285*; (9) Assaying, by A. McA. Johnston, pp. 286-321*; (10) Testing Materials, Supplies, Ore and Plant, pp. 323-378*; (11) Chemistry of Banket Ore Treatment, pp. 380-395*; (12) Tables, by W. A. Caldecott and H. A. White, pp. 399-457.

Dowling, W. R.—*The Amalgamation of Gold in Banket Ore.*—Chem. Met. & Mng. Soc. of S. Afr. Jnl., March,1911, p. 414; 6000 w*; April, p. 499; May, p. 557; July, p. 30; Nov., p. 178; 7600 w; $3.75. Also in Instn. of Mng. & Met'l'gy, Bull. 79, April, 1911; Bull. 80, May, p. 9; Bull. 82, July, p. —; $1.10.

Abstract of paper in Mining World, May 27, 1911, p. 1083; 4000 w*; 10c. Also in Mng. Sci., June1, p. 565; June8, p. 595; 6000 w*; 30c. Also in Pacific Miner, May, 1911, p. 12; 2500 w; 20c. Also in Canadian Mng. Jnl., June1, p. 345; 6000 w*; 25c. Also in Met. & Chemi. Engg., June, p. 322; 1500 w*; 35c. Also in M. & S. P., June10, p. 785; 3300 w*; 20c. Also in W. Australian Mng., etc., Jnl., July22, p. 5; 3500 w; 50c. Also in S. Afr. Mng. Jnl., Sept.2, p. 1101; 2000 w; 35c.

Gascoyne, R.—*A Modern Reduction Plant on the Witwatersrand;* [Modder B mill].—Mining & Engg. World, May4,1912; p. 953; 1600 w*; 10c.

Gieser, H. S. and C. A. Tupper.—*Mine and Mill of the Brakpan Mines, Ltd., Rand.*—M. & S. P., Dec.23,1911, p. 796; 3000 w*; 20c.

Nissen, P.—*Notes on High-Duty Gravity Stamp Mills;* [Tests of heavy Nissen stamps vs. intermediate-weight stamps at City Deep mill, Witwatersrand]—Chemi. Met. & Mng. Soc. of S. Afr., Jnl., Oct.,1911, pp. 111-124*; (Discussion), Oct., p. 124-126; Nov., p. 182-187*; Dec., p. 225; Jan.,1912, pp. 275-279; March, pp. 357-365*; $3.75.

Abstract in Afr. World, Nov.4, p. 587; Nov.18, p. 76; 2000 w; 50c. Also in S. Afr. Mng. Jnl., Nov.4, p. 307; Dec.23, p. 572; 4200 w; 50c. Also in E. & M. J., Dec.23, p. 1219; 1000 w; 25c. Also in Mng. & Engg. World, Dec.30, p. 1316; 1200 w; 10c.

Schmitt, C. O.—*Future Economies in Rand Reduction Plants.*—Chemi. Met. & Mng. Soc. of S. Afr., Jnl., April,1911, p. 464; 6000 w*; 90c. Also in Instn. of Mng. & Met'l'gy, Bull. 80, May,1911; 59 pp*; 50c. Abstracts in S. Afr. Mng. Jnl., May 27,1911, p. 547; July 1, p. 739; 3200 w; 50c.

Discussion and Reply—C. M. & M. Soc., Jnl., May,1911, p. 563; 5500 w; July, p. 16; 10,000 w; $1.40. Also in I. of M. & M., Bull. 81, June,1911, p. 3; 13,000 w*; 50c; Bull. 88, Jan.,1912, pp. 23-37; 50c.

Stadler, H.—*The New Metallurgy and the E. Rand Propr. Mines;* [Claims excessive refinement for present metallurgic practice, and advocates return to simpler methods].—E. & M. J., June8,1912; p. 1123; 1500 w; 25c. Also in Mines & Min-

erals, July, p. 739; 3600 w; tables; 35c. Also in M. & S. P., July20, p. 78; 4000 w*; 20c.

———. *Grade and Recovery; and Need for Economy on the Rand.*—S. Afr. Mng. Jnl., May11,1912; pp. 382; 383; 3000 w; 35c.

———. *Rand Table;* [Directory of companies, stamps and tube mill equipment, capital and dividends].—Mng. World (London), Feb.3,1912; p. 127; 1000 w; table; 35c.

———. *Robinson Deep New Plant.*—S. Afr. Mng. Jnl., Apr.6,1912; p. 189; 1000 w*; 35c.

———. *Sunday Milling on the Rand.*—S. Afr. Mng. Jnl., Dec.8,1911, p. 477; 1100 w; 35c.

———. *The "Big Mill" Policy on the Rand.*—S. Afr. Mng. Jnl., Dec.16,1912, p. 519; 1000 w; 35c.

———. *The Crown Mines' Crusher Stations.*—S. Afr. Mng. Jnl., Apr.13,1912; p. 233; 750 w*; 35c.

———. *The Crown Mines' New Reduction Plant.*—S. Afr. Mng. Jnl., March16, 1912; p. 45; 1000 w*; 35c.

———. *The Modder B Machinery and Plant;* [Visit by S. Afr. Inst. of Engrs.].—S. Afr. Mng. Jnl., March23,1912; p. 119; 1500 w; 35c. Also in S. Afr. Engg., May, p. 81; 1500 w*; 35c.

———. *The Way-Arbuckle Process at Benoni.*—M. & S. P., May25,1912; p. 723; 1500 w*; 20c.

———. *The Year with Premier Diamonds;* [Review for 1911].—S. Afr. Mng. Jnl., Feb.3,1912; p. 791; 1100 w; 35c.

———. *Treatment of Tailing Dumps on the Rand.*—Mining & Engg. World, Apr.6, 1912; p. 772; 1400 w; 10c.

———. *Troubles with Cyanide Plant, Benoni Cons. Mines.*—S. Afr. Engg., April, 1912; p. 69; 1000 w; 35c.

(c) Coal, Oil, Diamonds, Non-Metals

Brown, J. F. K.—*Coal Mining in the Transvaal;* [Read to Scottish Fed. Inst. of Mng. Students; abstract].—Iron & Coal Trades Rev., Jan.5,1912; p. 13; 3000 w; 30c. Also in German in Zentral Verbd. Bergbau Betriebsl. Oestr., Zts., Feb.15, p. 101-106; 45c.

Doman, W. A.—*The Great Diamond Mines of South Africa.*—Afr. World Annual, Dec.,1911; p. 317-323*; 3600 w*; $1.50.

Gunsaulus, E. N.—*New Diamond Diggings in the Transvaal;* [Bloemhof-Mooifontein].—U. S. Consul. Rep., Feb. 3, 1912, p. 535; 1800 w; 20c.

Harger, H. S.—*The Bloemhof and Mooifontein Diggings.*—S. Afr. Mng. Jnl., Nov. 18,1911, p. 363; Nov. 25, p. 401; Dec.2, p. 440; 4200 w; 65c.

Williams, A. F.—*The Kimberley System of Rock Handling;* [Read to S. Afr. Inst. of Engrs.; author's reply to discussion].—S. Afr. Mng. Jnl., May4,1912; p. 366; 2500 w; 35c.

———. *Coal Mines of the Transvaal; 1: Witbank Colliery.*—S. Afr. Mng. Jnl., Feb.24,1912; p. 893; 1600 w*; 35c.

———. *Diamanten; Vorkommen, Gewinnung, Bearbeitung und Verwertung;* [Diamonds, their occurrence, extraction, dressing and valuation].—Zentral Verbd. Bergbau Beitriebsl. Oestr., Zts.; March15,1912; p. 157; April1, p. 183; 7000 w; 50c.

———. *Equipment of the Apex Colliery;* [Rietfontein].—S. Afr. Mng. Jnl., Feb.3,1912; p. 797; 1600 w*; 35c.

———. *New Diamond Field Near Bloemhof, Transvaal.*—Mining & Engg. World, Apr.6,1912; p. 773; 1800 w; 10c.

———. *Progress of the River Dredgings.*—S. Afr. Mng. Jnl., May4,1912; p. 346; 500 w; 35c.

———. *Rush to the Bloemhof Diggings;* [New Transvaal diamond fields].—African World, Dec.23,1911. p. 399; 1200 w; 35c.

———. *The Bloemhof Diamond Diggings.*—S. Afr. Mng. Jnl., Dec.23,1911, p. 563; 2400 w*; 35c.

———. *The Diamond Fields of the Southwestern Transvaal;* [Bloemhof and Mooifontein].—Afr. World, Jan.13,1912, p. 572; 1500 w; 35c.

———. *The Mooifontein Diggings; and the Year with De Beers.*—S. Afr. Mng. Jnl., Dec.16,1912, p. 524, p. 525; 2000 w; 35c.

———. *The Outlook for Diamonds;* [Review of S. African productions].—S. Afr. Mng. Jnl., Dec.23,1912, p. 558; 1000 w; 35c.

———. *The Rush to the Bloemhof Diggings.*—Afr. World, Feb.3,1912; p. 755; Feb.10, p. 22; 2000 w; 50c.

———. *The Vaal River Diggers and Their Diamonds;* [Reviews meeting to obtain better price].—Afr. World, June8,1912; p. 255; 1600 w; 35c.

———. *The Vereeniging Estates Collieries.*—S. Afr. Engg., Feb.29,1912; p. 23; 1000 w*; 35c.

(d) Tin, Copper, Miscellaneous

Calderwood, J. M.—*Messina (Transvaal) Development Progress.*—S. Afr. Mng. Jnl., Apr.6,1912; p. 207; 1000 w; 35c. 600 w; 10c.

Hall, A. L.—*Transvaal Rich Chromite Deposits;* [Mooihoek, Sekukuniland].—Mining & Engg. World, March2,1912; p. 516;

Leitch, D. C.—*The Rand Water Supply;* [Read to Instn. of Civ. Engrs.; abstract].—Mng. Jnl., Feb.10,1912; p. 135; 1200 w; 35c. Also in Engg. Record, Feb.24, p. 202; 1000 w; 25c.

Marriott, H. F.—*Mining in the Transvaal in* 1911; [Gold, diamonds, tin, zinc, silver, copper, coal production, and mining practice].—E. & M. J., Jan.6,1912, p. 84; 3000 w; 25c.

Smith, G. H.—*The Manufacture of Steel in South Africa from Scrap.*—S. Afr. Mng. Jnl., Feb.24,1912; p. 905; p. 896; 3000 w; 35c.

Trevor, T. G.—*Ancient Mine Workings in the Transvaal;* [Gold, tin, copper, iron].—Cheml. Met. & Mng. Soc. of S. Afr.; Jnl.; Jan.,1912; p. 267-275*; March, pp. 370-372; April, pp. 414-415; $2.30. Abstract in S. Afr. Mng. Jnl., Jan.27,1912; p. 758; Feb.3, p. 792; Feb.10, p. —; 4000 w; 65c.

———. *Groenfontein Tin Mine;* [Review for 1911].—S. Afr. Mng. Jnl., Apr.6, 1912; p. 195; 1000 w; 35c.

———. *Latest Developments in the Tin Industry;* [Transvaal].—S. Afr. Mng. Jnl., March30,1912; p. 137; 2000 w; 35c.

———. *Northern Transvaal Copper;* [Developments at Messina].—S. Afr. Mng. Jnl., March16,1912; p. 50; 1000 w; 35c.

———. *Progress of Transvaal Steel Making Scheme.*—S. Afr. Mng. Jnl., Dec.2, 1911, p. 438; 1000 w; 35c. Also in African World, Dec.30, p. 455; 1000 w; 35c.

———. *Progress of the Witwatersrand*

Co-Operative Smelting Works; [for smelting slags, pots, liners, black sands and gold works refuse].—S. Afr. Mng. Jnl., March30, 1912; p. 142; 750 w*; 35c.

———. *The Bituminous Gas Engine in South Africa;* [Producer and gas-engines at Groenfontein tin mines].—S. Afr. Mng. Jnl., Dec.16,1911, p. 521; 2200 w*; 35c.

———. *The Mineral Output of the Transvaal in* 1911.—Mining & Engg. World, Apr. 6,1912; p. 768; 1500 w; 10c.

———. *Tin Mining in South Africa;* [Brief summary of various fields].—S. Afr. Engg., Jan.,1912; p. 6; 1200 w; 35c.

———. *The Problem of the Potgietersrust Tin Fields;* [Geology of ore bodies].—S. Afr. Mng. Jnl., Feb.10,1912; p. 831; 2400 w*; 35c.

———. *The Tin Fields;* [Recent Transvaal developments].—S. Afr. Mng. Jnl., Apr. 27,1912; p. 314; 2000 w; 65c. Also in Mng. World (London), May25, p. 661; 2000 w; 35c.

———. *The Transvaal Consol. Land & Explor. Co., Ltd., and the Transvaal Tin Industry.*—S. Afr. Mng. Jnl., Apr.13,1912; p. 239; 1400 w; 35c.

———. *The Transvaal's Output Record for* 1911.—Afr. World, Jan.13,1912, p. 569; 1000 w; tables; 35c.

———. *The Transvaal in* 1911; [Gold; also tin, copper].—Mng. Jnl., Jan.6,1912, p. 8; 1200 w; 35c.

———. *Tin in the Pretoria District.*—S. Afr. Mng. Jnl., Dec.9,1911, p. 482; 1400 w; 35c.

Congo; Central Africa

Aguillon, L.—*Régime légal des mines au Congo belge;* [Mining law and regulations in the Belgian Congo].—Annales d. Mines (Paris), Jan.,1912; pp. 5-28; 65c.

Ball, S. H.—*Diamonds in the Belgian Congo.*—E. & M. J., Feb.3,1912; p. 268; 1500 w*; 25c.

Ball, S. H.—*Mining in the Belgian Congo, West Africa, for* 1911; [Review of transportation, fuel, copper, gold, diamonds, tin, laws].—M. & S. P., Jan.20,1912, p. 133; 5000 w*; 25c.

Diederich, H. W.—*Copper from the Katanga;* [Discusses first shipments to Belgium].—U. S. Consul. Rep., Jan.24,1912, p. 391; 300 w; 20c.

Farrell, J. R.—*Tanganyika Concessions, Ltd.;* [Recent progress].—M. & S. P., Jan. 27,1912; p. 175; 1400 w; 20c.

Ganet, L.—*La question du cuivre au Congo belge;* [The copper question in the Belgian Congo].—Echo d. Mines, Dec.11, 1911, p. 1267; 1000 w; 35c.

Rousseaux, J.—*Progress in the Belgian Congo During* 1911.—Afr. World Annual, Dec.,1911, pp. 223-232*; $1.50.

Williams, R.—*The Outlook for Tanganyika Copper.*—S. Afr. Mng. Jnl., Jan.6,1912; p. 649; Jan.20, p. 717; 2400 w; 50c.

Williams, R.—*The Tanganyika Concessions, Ltd. Report* [for 1911].—Afr. World. May25,1912; p. 137; 1500 w; 35c.

Asso. de l'Université de Liège.—*Le Katanga;* [The Katanga; review of the country and resources; bibliography of mineral deposits literature].—Antwerp, 1911; 150 pp.; (book).

———. *Die Aussichten des Bergbaus im deutschen Kongogebiet;* [Outlook for mining in the German (French ceded) Congo; copper, tin, chiefly].—Kohle & Erz, Feb.12, 1912; p. 162; 500 w; 35c.

———. *Katanga Copper;* [Review for 1911].—E. & M. J., Jan.6,1912, p. 14; 500 w; 25c.

———. *Some Notes on Nyassaland.*—Afr. World, Dec.20,1911; p. 184G; 1000 w; $1.50.

———. *The Congo in* 1911; [Copper, gold, diamonds, graphite, coal].—Mng. Jnl., Jan.6,1912, p. 9; 1000 w; 35c. Reprint in S. Afr. Mng. Jnl., Feb.10, p. 828; 1000 w; 35c.

———. *The Development of Central Africa; A Tour to the Great Copper Belt of Katanga.*—Afr. World Annual, Dec.,1911, pp. 235-251*; $1.50.

———. *The Mineral Deposits of the Congo.*—Afr. World, March30,1912; p. 462; 2000 w; 35c.

East Africa

Brown, A. S., and G. G.—*The Guide to South and East Africa;* [Annual of Union Castle Mail Steamship Co., 1911-1912].—London, 1912; pp. xliv, 492; (book).

Draper, T.—*Mining in Madagascar;* [Outlines physical conditions of country.]—Mng. Mag., Dec.,1911, p. 439; 2800 w*; 35c.

Lacroix, A.—*Les recherches minières de Madagascar;* [Mineral resources of Madagascar; chiefly gold, gems, uranium].—Echo d. Mines, Apr.15,1912; p. 456; 1200 w; 35c. Reprint in Soc. Amicale d. Mineurs de Douai, Bull., Apr.25, p. 237; 35c.

Merle, A.—*Explorations minières dans le centre et l'ouest de Madagascar;* [Mining explorations in the center and west of Madagascar].—Paris, 1912; 158 pp*; $2.50; (book).

———. *Diatomite from the E. Africa Protectorate;* [Analyses of deposits along Rif valley].—Imperial Inst., Bull., Apr., 1912; p. 74; 300 w; 75c.

———. *The Future of the Mining Industry in Madagascar;* [Chiefly gold, gems, graphite, platinum, oil].—Mining & Engg. World, Dec.16,1911, p. 1221; 1000 w; 10c.

———. *The Zambesia Mineral Areas;* [Routes and conditions in Tete copper-gold area; from Mozambique Jnl.].—S. Afr. Mng. Jnl., March30,1912; p. 147; 1200 w; 35c.

West Africa

Ackermann, Eug.—*Notices sur le Sénégal;* [Notes on Senegal].—Paris, 1911; pp. —; (Pamphlet).

Barker, W. H.—*Engineering on the Gold Coast.*—Cassier's Mag., March,1912; p. 195-202*; 35c.

Blockley, E.—*Engineering in the Tropics; West Africa Experience* [in the goldfields].—Engg. News, Feb.22,1912; p. 346; 1600 w; 25c.

Chamberlin, A. M. — *Nigerian Tin Fields;* [Brief description].—M. & S. P., Apr.13,1912; p. 535; 500 w*; 35c.

Foster, D. F.—*Labor and Superintendence on the Gold Coast.*—M. & S. P., Feb. 3,1912; 2000 w*; 20c.

van der Ham, A.—*Elektrotechnische Skizzen aus dem Diamantbergbau Südafrikas;* [Applications of electricity in diamond mining in German SW. Africa].—E. T. Z., Feb. 1,1912; pp. 101-104*; 75c.

Abstract in Elektrotechnik & Maschbau, March17,1912; p. 231; 750 w; 35c.

Hooke, A. W.—*Tin Mining in Northern Nigeria, W. Africa.*—Mng. & Engg. Rev., Jan.,1912; p. 158; 3200 w*; 35c.

Huddart, L. H. L.—*Northern Nigeria, Mining, Trading and Transport Developments.*—Mng. World (London), March30 (Supplement),1912; xx pp*; 35c.

Johnson, H.—*Mining in Northern Nigeria; The Minerals' Proclamation.*—Mng. World (London), Apr.6,1912; p. 422; p. 424; 2000 w; 35c.

Judd, H. A.—*Nigerian Tin Mining;* [Reviews general conditions on Bauchi plateau].—Mng. World (London), Jan.27, 1912; p. 99; 800 w; 35c.

Lacroix, A.—*Les syenites néphéliniques de l'archipel de Los et leurs minéraux;* [The nepheline syenites of the Los I'ds., French Guinea, and their mineralogy].—Mus. d'Hist. Nat. (Paris), Nouv. Archives, Ser. 5, Vol. III, pp. 1-132; 10 plates; 1911.

Brief review, Amer. Jnl. of Sci., Jan., 1912; p. 68; 500 w; 65c.

Morel, E. D.—*Nigeria; Its Peoples and Its Problems.*—London, 1911; pp. xviii, 265*; $3 (book).

Brief review in Afr. World, Dec.9,1911, p. iii.

Murray, J.—*Gold Coast Memoranda;* [Reviews the country and gold production].—Afr. World, Dec.20,1911, p. 204; 3500 w; $1.50.

Orr, C. W. J.—*The Making of Northern Nigeria;* [Chiefly on political history and conditions].—London, 1911; pp. ix, 290*; (book).

Range, Paul.—*Diamantproduktion in Deutsch-Südwestafrika;* [Diamond production in German SW. Africa, 1911].—Bergwirtsch. Mittlngn., April,1912, p. 67, p. 68; 500 w; $1.

Stromer, —. *Ueber Alttertiär in Westafrika und die Südatlantis;* [The older Tertiary in West Africa and the south "Atlantis" province].—Kgl. preus. Geol. L-A., Jahrb., Vol. 30, Pt. 1, No. 3; pp. 511-515.

Turner, J. R. F.—*The Jungle Mines in* 1911; [Review of West African gold mining].—Afr. World Annual, Dec.,1911, pp. 207-215*; $1.50.

Watson.—*L'or en Guinée;* [Gold placers in Upper French Guinea].—Echo d. Mines, Apr.25,1912; p. 508; 500 w; 35c.

Wethered, O.—*The Nigerian Tin Fields;* [Labor conditions; production last 4 months of 1911 by companies].—Afr. World, Jan.13, 1912, p. 583; 500 w; table; 35c.

Yerby, W. J.—*Commerce of the Gold Coast Colony;* [Includes gold production, 1910].—U. S. Consul. Rep., Jan.24,1912, p. 392; 800 w; 20c.

Yerby, W. J.—*Coal Deposits of Southern Nigeria.*—U. S. Consul. Rep., Feb.1,1912, p. 511; 300 w; 20c.

———. *Costs in Nigeria;* [Alluvial tin workings; costs of concentrates per ton].—Mng. Mag., Apr.,1912; p. 247; 1000 w; 45c.

———. *Der Zinnbergbau von Nigeria;* [The tin mining industry of Nigeria].—Montan Ztg., June1,1912; p. 205; 1100 w; 35c.

———. *Diamond Taxation in German S. W. Africa;* [Revision of mining regulations].—S. Afr. Mng. Jnl., Feb.3,1912; p. 781; 500 w; 35c.

———. *Les mines d'étain de la Nigérie;* [The tin mines of Nigeria].—Rev. Parisienne, March10,1912; 1200 w; 75c.

———. *L'or à la côte d'Ivoire;* [Review of gold mining on the Ivory Coast].—Echo d. Mines, Jan.15,1912; p. 60; 750 w; 35c.

———. *Nigerian Tin Mining;* [Recent progress].—Afr. World, Jan.6,1912, p. 5241; 1500 w; 35c.

———. *Nigerian Tin Industry;* [Review of Production, 1911].—Mng. World (London), Dec.23,1911, p. 340; 1200 w; 35c.

———. *Nigerian Tin Mining;* [Output of companies monthly, Aug., 1911-Jan., 1912].—Mng. World (London), Feb.17,1912; p. 190; 1600 w; 35c.

———. *Nigerian Tin Mining;* [Review of recent developments].—African World, Dec.16,1911, p. 337; 2000 w; 35c.

———. *Nigerian Tin Developments.*—Afr. World, March2,1912; p. 197; March9, pp. 243-249; March16, pp. 309-315*; March 23, p. —; 10,000 w; 75c.

———. *Northern Nigeria;* [Review of developments, 1st quarter, 1912].—Mng. Jnl., May4,1912; p. 424; 1500 w; 35c.

———. *Northern Nigeria;* [Tin and silver mining developments].—Mng. Jnl., Jan. 27,1912; p. 100; 500 w; 35c.

———. *Northern Nigeria;* [Transportation and Baro-Kano Ry].—Mng. Jnl., Jan.6, 1912, p. 30; 300 w; 35c.

———. *Production and Treatment of Gold, Gold Coast Colony;* [1910; from U. S. consular report].—Mining & Engg. World, May25,1912; p. 1088; 300 w; 10c.

———. *Prospecting for Petroleum in West Africa.*—Petroleum Rev., May4,1912; p. —; 1000 w*; 35c.

———. *The Coal Deposits at Udi, S. Nigeria.*—S. Afr. Engg., Jan.,1912; p. 11; 500 w; 35c.

———. *Tin Deposits in Northern Nigeria.*—Mng. Mag., March,1912; p. 175; 1800 w; 35c.

———. *The Gold Coast Mines.*—Mng. & Engg. Rev., Sept.,1911, p. 480; Nov., p. 71; Dec., p. 113; 8000 w*; 65c.

Abstract of part 1 in M. & S. P., Nov.18, 1911, p. 653; 1500 w*; 20c.

———. *The Gold Coast;* [Review for 1910].—Mng. Jnl., Dec.16,1911, p. 1213; 1500 w; 35c.

North Africa

Blake, M.—*Geological Notes from Morocco;* [General notes and customs of mineral location].—U. S. Consul. Rep., Apr.17,1912; p. 236; 750 w; 20c. Abstract in M. & S. P., June8, p. 791; 500 w; 20c.

Burton, Wm.—*Ancient Egyptian Ceramics.*—Roy. Soc. of Arts, Jnl., May3,1912; p. 594-602; 35c.

Campredon, L.—*Les ressources de la France en minerais de fer; Tunisie;* [Iron-ore resources of France; Tunis].—Métallurgie, Jan.10,1912, p. 19; 1000 w; 35c.

English abstract in London Mng. Jnl., Jan.27,1912; p. 103; 700 w; 35c.

Carol, P.—*La question de l'Ouenza;* [The iron ore deposits of Djebel Ouenza, Constantine].—Rev. Indl. du Centre, Jan.27, 1912; p. 9; 1000 w; 35c.

Dove, K.—*Marokko und die wirtschaftpolitischen Beziehungen in Afrika zwischen Deutschland und Frankreich;* [Morocco and the industro-political controversy between Germany and France].—Leipzig, 1912; 34 pp.; $1; (pamphlet).

Dussert, M.—*Etude sur les gisements de fer de l'Algérie;* [Monograph on the iron ore deposits of Algeria].—Annales d. Mines (Paris), Feb.,1912; pp. 69-134*; March, pp. 135-256*; $1.20.

French abstract in Soc. Amicale d. Mineurs de Douai, Bull., May10, pp. 279-282; 600 w; 35c.

Italian abstract in Rassegna Mineraria, May11, p. 265; May21; 5000 w; 50c.

Flegel, K.—*Die nutzbaren Mineralen Nordafrikas;* [Workable mineral deposits of northern Africa; Morocco, Algeria, Tripoli; chiefly phosphate; also lead, zinc, iron, gold, silver, salt].—Techn. Blätter, Jan.,27, 1912; p. 25; 5000 w; 35c.

Flegel, Dr.—*Die Phosphate von Algier und Tunis, Ihre Lagerstätten, etc.;* [The phosphates of Tunis; deposits, preparation and industrial significance].—Deu. Bergwerks Ztg., Suppl. No. 6, Nov.28,1911, p. 1; 2000 w; 50c.

Gianno, Salv.—*I bacini minerari della Tripolitania; 1: Giacimenti di fosfato i di zolfo;* [Mineral deposits of Tripoli; 1: Phosphate and sulfur].—Soc. Ital. di Esplor., Boll. (Esplor. Commerciale), No. 10, Oct., 1911, pp. —. Abstract in Rassegna Mineraria, Dec.21,1911, p. 291; 1200 w; 35c.

Ginestous, G.—*Esquisse géologique de la Tunisie;* [Geology and mining industry of Tunis].—Paris, 1912; 164 pp*; $2 (book).

Hume, W. F.—*The Gypsum Deposits of the Marîût Region;* [Mediterranean Egypt].—Cairo Scient. Jnl., Feb.,1912; p. 43; 1000 w; 65c.

von Klebelsberg, R.—*Ein Beitrag zur Kenntnis des Sinai Carbons;* [The carboniferous formations of Sinai, Egypt].—Deu. Geol. Ver., Zts., No. 12, 1911; pp. 594-603; $2.

Opstaele, Geo.—*Exploitation platière moderne en Egypte;* [A modern gypsum and plaster plant in the Mariouth region, Egypt].—Rev. d. Matériaux, Dec.,1911, p. 205; 3000 w*; 65c.

Pitaval, R.—*L'industrie minière tunisienne en* 1911; [Review of mineral production of Tunis in 1911; lead-zinc and iron ores; phosphate rock].—Echo d. Mines, Apr.29, 1912; p. 514; 1000 w; 35c. Reprint in Soc. Amicale d. Mineurs de Douai, Bull; May10, pp. 282-286; 1000 w; 35c.

Thomas, E. S.—*The Mineral Industry of Egypt;* [Turquoise mining, ancient and modern, Sinai region].—Cairo Scient. Jnl., March,1912; p. 56; 2500 w*; 75c.

Abstract in Mining & Engg. World, July 13, p. 53; 900 w; 10c.

———. *Account of the Numidian Marbles and Onyx* [of western Algeria].—Stone Trades Jnl., April,1912; p. 1102; 3000 w*; 35c.

———. *Algerian Oil Fields, Ltd.*—Petroleum World, Jan.,1912, p. 56; 2000 w; 35c.

———. *Aegyptische Phosphat;* [Egyptian phosphate].—Zentralbl. f. Kunstdünger-Ind., Dec.7,1911, p. 396; 2000 w; 35c.

———. *Analyse eines algerischen Erdöles;* [Analyses of Algerian oil].—Allgm. Oestr. Chemiker Ztg., Feb.1,1912; p. 22; 500 w; 45c.

———. *Annuaire de la Chambre syndicale française des mines métalliques* 1911-1912; [Directory and yearbook of the French Chamber of Mines (metal mines, and including Algiers and Tunis), 1911-1912].—Paris, 1912; 742 pp; $2.25 (book).

———. *Der deutsche Erzbedarf und die Sozialdemokratie;* [Germany's iron-ore import needs and the Moroccan question].—Centralbl. d. Hütten & Walzwerke, Jan.5, 1912, p. 5; 1800 w; 35c.

———. *Les gisements de soude de l'Afrique du Nord;* [The soda deposits and workings of Algeria].—Echo d. Mines, Jan. 22,1912; p. 93; 200 w; 35c.

———. *Les lignites de Tunisie;* [The lignites of Tunis; from Tunisie Minière].—Echo d. Mines, Dec.4,1911, p. 1245; 1000 w; 35c.

———. *Nouvelles d'Algérie-Tunisie;* [Recent developments in mining in Algeria-Tunis; phosphate, iron, marble, copper, lead, zinc, mercury].—Echo d. Mines, Jan.4,1912, p. 6; 1200 w; 35c.

———. *Phosphate de Tunisie;* [Statistics of phosphate shipments to countries from Tunis in 1909 and 1910].—Phosphate, Dec.25,1911, p. 987; 500 w; table; 35c.

———. *Production minière de l'Algérie en* 1911; [Mineral production of Algeria in 1911; phosphate, iron, copper, lead-zinc and antimony ores].—Echo d. Mines, March11, 1912; p. 306; 500 w; tables; 35c.

———. *Reference List for Phosphates;* [Bibliography of world's phosphate deposits.]—U. S. Congress (62d.) 2d Session, Senate Doc. No. 190; 1912; pp. 78-106.

ASIA.

Arabian Peninsula

Dominian, L.—*Mining in Turkey in* 1911; [Chiefly chrome ore, meerschaum, oil; also antimony, asphalt, coal, borax, copper, emery, gold, pyrite, lead, manganese, mercury, silver and zinc ores].—M. & S. P., Jan.6,1912, p. 58; 2500 w*; 35c.

Kern, Dr.—*Die rechtlichen und wirtschaftlichen Verhältnisse im Steinkohlengebiet von Heraklea in Kleinasien;* [Coal mining in the Heraclea district, Asia Minor; its legal, technical and industrial aspects].—Berg- & Hüttenm. Rundschau, May5, 1912; p. 163; 5500 w; 35c.

Krusch, —. *Die Phosphatlagerstätten bei Es-Salt im Ostjordanlande;* [Phosphate deposits east of the Jordan].—Zts. f. prakt. Geol., Dec.,1911, pp. 397-406*; 75c.

Radimsky, —. *Mineralische Produkte in Persien;* [Minerals and mineral resources of Persia; from German consular report].—Montan. Ztg., Apr.1,1912; p. 124; 1000 w; 35c.

German abstract on sulphur and Chile saltpeter deposits in Zentralbl. f. Kunstdünger Ind., March21, p. 86; 400 w; 35c.

Reinhardt, A.—*Ueber Meerschaum und Meerschaum-Fundstätten bei Eskischehir in Kleinasien;* [Meerschaum and meerschaum deposits near Eski-schehir, Asia Minor].—Petermann's Mittlngn., 1911, pp. 251-255*; 75c.

Stahl, A. F.—*Geologie von Persien;* [Manuals of Regional Geology; Vol. V: Geology of Persia].—Heidelberg,1912; 46 pp*; $1 (book).

———. *Copper Mines in Turkey;* [Arghana deposits, upper Euphrates].—Levant Trade Rev., Nov.,1911, p. 218; 500 w; 75c.

———. *Meerschaum Mining in Asia Minor.*—Mining & Engg. World, Jan.27, 1912; p. 160; 500 w; 10c.

———. *Mineral Resources of the District of Mersine, Asia Minor;* [Iron, chrome, copper, zinc-lead-silver; from "Levant Trade Review"].—Mining & Engg. World, Jan.13,1912; p. 62; 500 w; 10c.

———. *Mineral Resources of Turkey in Asia;* [Trebizond, Mersine, Smyrna and Harput districts; chiefly copper, silver-lead, zinc, chrome iron, iron, emery, mercury, antimony, gold, nitre, coal].—Levant Trade Rev., Nov.,1911, p. 131-156; 75c.

China

Anderson, G. E.—*Iron and Coal Production in China.*—U. S. Consul. Rep., Feb.2, 1912; p. 521; 500 w; 20c. Reprint in Mining & Engg. World, Apr.6,1912; p. 771; 10c.

Bell, H. T. Montague; and H. G. W. Woodhead.—*The China Yearbook,* 1912.—London; 1912; pp. —; $3.50 (book).

Caldwell, Geo. S.—*Experience on a Chinese Coal Field;* [Practice in Lai Heu Ho field, northern Shansi; read to Manchester Geol. & Mng. Soc; abstract].—Iron & Coal Trades Rev., May17,1912; p. 806; May24, p. 847; 3300 w*; 50c. Also in Coll'y Guardn., May24, p. 1031; 3500 w; 30c. Also in Mng. Engg., June,1912; p. 74; 2000 w; 35c.

Dodson, W. D. B.—*China and Chinese Engineering;* [Coal, iron and tin resources and present manner of development].—Asso. of Engg. Soc's, Jnl.; Feb.,1912; pp. 78-91; 40c. Abstract in Iron & Coal Trades Rev., March 29,1912; p. 491; 3000 w; 35c.

Fleck, A.—*Der Kupferbergbau in Ostasien;* [Copper mining in China and Japan].—Bergbau, Feb.29,1912; p. 123; March7, p. 133; 6000 w; 50c.

Hommel, W.—*Origin of Zinc Smelting;* [In China and India].—E. & M. J., June15, 1912; p. 1185; 400 w*; 25c.

In German in Zts. f. angew. Chemie, Jan. 19,1912; pp. 97-100*; 75c.

Huntington, E.—*Gold Workings in Central Asia;* [Primitive practice in Ladakh and Karatash valley districts, west China].—M. & S. P., Apr.27,1912; p. 600; 1000 w; 20c.

Knabenshue, S. S.—*Chinese Coal for United States;* [Kaiping Basin, Tientsin, developments].—Mines & Minerals, Apr., 1912; p. 537; 2000 w*; 35c. Also in Coal Trade Bull., May1, p. 47; 2000 w; 25c.

Lovegrove, L.—*British North Borneo.*—Roy. Soc. of Arts, Jnl.; Apr.12,1912; p. 545; 7000 w; 35c.

Martell, P.—*Das Salinenwesen in Japan und China;* [Salt industry of Japan and China].—Techn. Blätter, May18,1912; p. 157; 500 w; 35c.

Read, T. T.—*The Mineral Production and Resources of China;* [Chiefly coal, iron, gold; also silver, copper, nickel, tin, lead, zinc, antimony, quicksilver, arsenic, petroleum; bibliography].—Amer. Inst. Mng. Engrs., Bull. 63; March,1912; pp. 293-344*; $1.15. Abstract in M. & S. P., Oct.7, 1911; p. 450; Nov.11, p. 616; 10,000 w*; 30c.

Read, T. T.—*Mining in China,* 1911; [Chiefly coal, oil, iron and steel developments].—M. & S. P., Jan.6,1912, p. 33; 750 w; 35c.

Read, T. T.—*China as a Coal Producer;* [abstract from Amer. Inst. Mng. Engrs., Trans. for 1911].—Coal Age, Apr.20,1912, p. 910; 3000 w*; 20c. Also in Colliery Guardian, May10, p. 933; 4500 w*; 35c. Extract on coal and iron; in Iron & Coal Trades Rev., May10, p. 760; 7500 w*; 45c.

In Italian in Rassegna Mineraria, Apr.11, 1912; p. 210; 2100 w; 45c.

Swensen, K. P.—*The Lanchow Mines in China.*—Coal Age, June1,1912; p. 1098; 4000 w*; 20c.

di Villa, Edw.—*Diamonds in China* [Black diamonds].—M. & S. P., March16, 1912, p. 412; 2000 w; 20c.

Wang, Cho-Yang and Cheng-Fu.—*Notes on the Han-Yeh-Ping Iron & Coal Co., China.*—Columbia School of Mines Quar'ly, Jan.,1912; p. 165; 1000 w*; 65c. Reprint in Iron & Coal Trades Rev., March8, p. 375; 30c.

Weigall, A. R.—*Foreign Mining Enterprise in China;* [Discusses treaty of 1901 stipulating revision of Chinese mining regulations, and absence of such revision].—Mng. Mag., Apr.,1912; p. 291; 600 w; 45c.

———. *Chinese Iron and Steel Production;* [Works of Han-Yang Co.].—Iron Trade Rev., Apr.11,1912; p. 803; 500 w; 20c.

———. *Der Bergbau in China* [Coal mining industry in Chili and North China region].—Montan Ztg., March15,1912; p. 106; April1, p. 122; 5000 w; 50c.

———. *Petroleum in China.*—Well Drillers' News, March,1912; p. 91; 900 w; 10c.

———. *The Mining Industry of Yunnan;* [Outlines tin mining and smelting practice].—Roy. Soc. of Arts, Jnl., Jan.12, 1912, p. 227; 1000 w; 25c.

———. *Ueber den Erzbergbau in der chinesischen Provinz Hunan;* [Mining industry in Yunnan, China; antimony, lead, iron, gold, silver, lead-zinc; from German consular report]. — Erzbergbau, March15, 1912; p. 86; 1500 w; 35c.

East Indies

Brooks, C. J.—*Cupellation of Gold Precipitate;* [at Bau, Borneo].—Mng. Mag., March, 1912; p. 193; 2600 w*; 35c.

Engler, C. and W. Steinkopf.—*Ueber die Anwesenheit von Cholesterin in Java Erdölen;* [Oppose Koch's views on mode of occurrence of cholesterine in Java petroleum].—Petroleum, Dec.6,1911; p. 205; 2000 w; 50c.

Killik, F. A.—*Notes on a Simple Method of Separating Rock from Stiff Clays;* [at Totok gold mines, Celebes].—Instn. of Mng. & Met'l'gy, Bull. 87, Dec.,1911, p. 1-7; 1200 w*; (Discussion), Bull 88, Jan.,1912, p. 11-12; 500 w; 75c.

Abstract of paper in Mining & Engg. World, Jan.13,1912; p. 61; 1600 w*; 10c. Also in Mng. Sci., Jan.18, p. 47; 1600 w*; 20c. Also in E. & M. J., Feb.10, p. 304; 1600 w*; 25c. Also in Mines & Methods, Feb., p. 419; 1500 w*; 25c.

Lovegrove, L.—*British North Borneo.*—Roy. Soc. of Arts, Jnl., Apr.12,1912; p. 545; 7000 w; 35c.

Also in German in Erzbergbau, March15, p. 82; 1000 w*; 35c.

Martin, K.—*Geologisches aus dem südwestlichen Neu-Guinea;* [Geologic notes on southwestern New Guinea].—Kkl. Akad. Wetenschappen Amsterdam, Verhandl., Oct. 28 (read), 1911.

McMurtrie, S.—*Underground Methods in Indian Mining;* [Coal].—Mng. & Geol. Inst. of India, Trans.; Jan.,1912; pp. 257-295*; $2.50.

Molengraaff, G. A. F.—*The Working of Billiton.*—Mng. Jnl., Feb.3,1912; p. 113; 1000 w; 35c.

———. *Note sulla esposizione di Torino;* [Notes on the Turin exposition, 1911; Metallic ores (chiefly iron) of Brazil, Argentina, Siam, Servia, Russia].—Met'l'gia Ital., Dec.,1911; pp. 796-818; 45c.

India

Adams, —. *Deep Mining in India;* [Outlook for coal mining industry; presidential address Mng. & Geol. Inst. of India; abstract].—Coll'y Guardn., March1,1912; p. 434; 1500 w; 30c.

Bastin, E. S.—*The Production of Graphite in* 1911.— See under United States.

Brown, J. C.—*Some Factors Governing the Accurate Valuation and Successful Exploitation of Gold-Bearing Alluvials in India.*—Mng. & Geol. Inst. of India; Trans.; Jan.1912; pp. 209-212; $2.50.

Abstract in Mng. Jnl., May4, p. 452; 500

w; 35c. Also in Mining & Engg. World, May25, p. 1100; 1000 w; 10c.

Carter, H. A.—*Gold Mines of Mysore.*—M. & S. P., Feb.3,1912; p. 201; 700 w*; 20c.

Carter, H. A.—*Manganese Mining in British India.*—Mng. & Sc. Press, Dec.30,1911, p. 834; 3000 w; 20c.

Capito, —. *The Oil Wells of Assam, Burmah.*—Instn. of Civ. Engrs., Proc., Vol.185; 1911; pp. 363-378*.

Finlayson, A. M.—*Labour on the Burmese Oilfields.*—Mng. Mag., Feb.,1912; p. 137; 1800 w*; 45c.

Flegel, K.—*Die wichtigsten Graphitlagerstätten der Welt und ihre wirtschaftliche Bedeutung;* [The world's leading graphite deposits and their industrial significance].—Techn. Blätter, March16,1912; p. 84; March23, p. 91; 5000 w; 50c.

Gardiner, C. Roe.—*History of the Diamond Fields of India, Brazil and S. Africa.*—Mining & Engg. World, Feb.17,1912; p. 403; March2, p. 513; 5500 w; 20c.

Graves, H. G.—*Further Notes on the Early Use of Iron in India.*—Iron & Steel Inst., Jnl., May,1912; pp. —; 50c. Reprint in Engnrg., May10,1912; p. 644; 2100 w*; 35c. Also in Iron & Coal Trades Rev., May 10, p. 731; 2100 w*; 45c.

Hadfield, Sir Rob.—*Sinhalese Iron and Steel of Ancient Origin.*—Iron & Steel Inst., Jnl; May,1912; 40 pp*; 50c. Abstract in Iron & Coal Trades Rev., May10, p. 725; 12,000 w*; 45c.

Italian abstract in Rassegna Mineraria, July1, p. 8; 1500 w; 35c.

Hommel, W.—*Ueber indisches und chinesisches Zink;* [Origin of zinc production in India and China].—Zts. f. angew. Chemie, Jan.19,1912; pp. 97-100*; 75c.

In English in E. & M. J., June15, p. 1185; 4000 w*; 25c.

Jakób, W. and S. Tolloczko.—*Chemische Analyse des Thorianits von Ceylon;* [Chemical analyses of thorianite from Ceylon; read to Akad. d. Wiss., Krakau, Nov.,1911; brief abstract].—Chemiker Ztg., Feb.17, 1912, p. 191; 100 w; 30c. Also (in English) in Mining & Engg. World, March16, p. 608; 100 w; 10c.

Leather, J. W. and J. N. Mukerji.—*The Indian Saltpetre Industry.*—Agricl. Research Inst., Pusa, India; Bull. 24; 19 pp*; 75c.

French abstract in "Phosphate," March4, 1912; p. 129; 2000 w*; 35c.

German abstract in Zts. f. Sprengstoffw., March15,1912; p. 116; Apr.1, p. 136; 6000 w*; 50c.

Michael, W. H.—*Primitive Method of Mining Mica in India;* [From U. S. Consul. report].—Mining & Engg. World, Jan. 20,1912; p. 120; 500 w; 10c.

Rosedale, I.—*Coal Supply for the Railways of India;* [Indian collieries].—Cassier's Mag., Jan.,1912, p. 72; 750 w; 35c.

Salisbury, G. H.—*American Oil Well Drillers in Burmah;* [Describes oil, oilfields and drilling].—Oil Age, March1,1912; p. 7; p. 10; June21, p. 9; 2000 w; 30c.

———. *Goldfields of Mysore;* [Review for 1911].—Mng. World (London), March9, 1912; p. 296; p. 298; 2000 w; 35c.

———. *Indian Monthly Gold Output;* [1909-1911].—Mng. Jnl., Jan.6,1912; table; 35c.

———. *India's New Mining Field; Anantapur.*—Mng. World (London), March2, 1912; p. 266; 1000 w; 35c.

———. *Kalimati Meeting; General Description of Tata Iron & Steel Co., Ltd., Works, Sakchi, Bengal, India.*—Mng. & Geol. Inst. of India, Trans., Jan.,1912; p. 196-208.

———. *The Coal Industry of India.*—Coll'y Guardn., Apr.12,1912; p. 732; 1800 w; 35c.

———. *The Farnham Suction Gas-Producer; Tests on Bengal Coal.*—Indn. & Eastn. Engr., Jan.,1912; p. 21; 2500 w*; 65c.

———. *The Mines of Mysore;* [Abstract of report of Geol. Dept. and Chief Inspector of Mines for 1910].—Mng. World (London), June8,1912; p. 735; 2000 w; 35c.

———. *The Tata Iron & Steel Co.'s Plant;* [Modern American-designed works at Sakchi, Bengal, India].—Iron Age, Apr. 11,1912; p. 906; 3500 w*; 30c. Also in Iron & Coal Trades Rev., May3, p. 675; 3500 w*; 35c.

Japanese Empire

Bain, H. F.—*Influence of the Panama Canal Upon the Coal Trade;* [Discusses coal resources of countries bordering on the Pacific and conditions of competition; read to Canadn. Mng. Inst.].—Coll'y Guardn., Apr.19,1912; p. 799; 3000 w*; 35c.

Bain, H. F.—*Japan's Mineral Production;* [Review of coal and copper; also gold, silver, iron and steel, zinc, and table for 1910].—M. & S. P., Jan.6,1912, p. 52; 2500 w*; 35c. Abstract on coal industry in Coal Age., March16, p. 740; 1200 w*; 20c. Also in Black Diamond, Mach23, p. 18; 3000 w*; 30c.

Brown, M.—*Australian vs. Japanese Coal in the Eastern Markets.*—Australian Mng. Standd., Nov.30,1911, p. 548; 1000 w; 35c. Abstract in Mining & Engg. World, Feb.24, 1912; p. 450; 1000 w; 10c.

Drucker, A. E.—*Kuk San Dong Cyanide Plant;* [Oriental Consol. Mg. Co., Chosen].—M. & S. P., Jan.13,1912, p. 103; 600 w; 20c.

Flech, A.—*Der Kupferbergbau in Ostasien;* [Copper mining in China and Japan].—Bergbau, Feb.29,1912; p. 123; March7, p. 133; 6000 w; 50c.

Hirano, Prof. — *Porzellanbrennöfen in* Japan; [Porcelain kilns in Japan].—Ton-Industrie Ztg., March19,1912; p. 481; 1000 w*; 25c.

Hubbard, J. D.—*A Convenient Slag Furnace;* [Reduction of slags in melting cyanide precipitate at Oriental Consol. Mng. Co., plant, Taracel, Korea].—M. & S. P., Apr.27,1912; p. 597; 1000 w*; 20c.

Kawamura, T.—*The Osaruzawa Mine;* [Describes this Japanese copper mine and mill, with flow sheet].—M. & S. P., May25, 1912; p. 720; 1500 w*; 20c.

Knox, W. M.—*Gold Mining in Formosa;* [With annual production of gold, silver, copper, coal, oil, sulphur, 1906-1910].—M. & S. P., March23,1912; p. 435; 1600 w; 20c.

Kôzu, S.—*Preliminary Notes on Some Igneous Rocks of Japan; V: Potash-Rhyolite.*—Jnl. of Geol'y, Jan.-Feb.,1912; p. 45-48; 80c.

Martell, P.—*Das Salinenwesen in Japan und China;* [Salt industry of Japan and China].—Techn. Blätter, May18,1912; p. 157; 500 w; 35c.

Martin, J. J.—*Prospecting Gold Placers in Korea.*—M. & S. P., May18,1912; p. 690; 2000 w*; 20c.

Nishio, K.—*The Mining Industry of Japan;* [Historical development of laws and mining practice; tables of annual production 1874-1908, of gold, silver, copper, lead, tin, iron, pyrite, antimony, sulfur,

phosphate, zinc ore, manganese ore, graphite, coal, petroleum].—Amer. Inst. Mng. Engrs., Bull. 61, Jan.,1912, pp. 103-147*; $1.15.

Okada, Yoichi.—*Der "Mabuki" Prozess;* [The Mabuki process of copper recovery from ore as practiced in Japan].—Freiberg, Saxony; 1911; 20 pp.; 6 figs.; $1.00; (pamphlet).

Raymond, R. W.—*The Excursion to Hawaii and Japan;* [Includes notes on various Japanese copper mines and smelters, collieries and steel plants].—Amer. Inst. Mng. Engrs., Bull. 61, Jan.,1912, pp. 1-102*; $1.15.

Reat, S. C.—*The Gold Mines of Formosa.*—U. S. Consul. Rep., Apr.29.1912; p. 396; 600 w; 20c. Reprint in Mining & Engg. World, June8, p. 1194; 10c.

Richards, J. W.—*The Japan Excursion of the American Institute of Mining Engineers;* [Shisaka and Nikko copper smelters and Yawata imperial steel works].—Met. & Cheml. Engg., Jan.,1912, p. 15; 5000 w*; 35c.

Richards, J. W.—*Treatment of Mine Water from the Ashio Copper Mine;* [For recovering copper and clarifying discharge].—Amer. Inst. Mng. Engrs., Trans., Feb.,1912, pp. 4; 1000 w*; 50c. Abstract in Mining & Engg. World, Aug.3, p. 196; 800 w*; 10c.

———. *American Mining Interests in Korea;* [Low-grade gold mines and milling of Oriental Cons. Mng. Co.].—Mining & Engg. World, June1,1912; p. 1140; 1500 w; 10c.

———. *Japanese Coal Mines in Manchuria.*—U. S. Consul. Rep., Feb.26,1912; p. 832; 200 w; 20c.

———. *Progress of the Zinc Industry.*—M. & S. P., Apr.27,1912; p. 587; 1400 w; 20c.

———. *Review of Mining Industry in 1911; Japan.*—Mining & Engg. World, Jan. 27,1912; p. 274; 1000 w; 25c.

———. *Smelter Fume in Japan.*—M. & S. P., March9,1912, p. 364; 1500 w; 20c.

———. *The Nikko Copper Works, Japan.*—M. & S. P., March30,1912; p. 471; 1200 w*; 20c.

———. *The Sumitomo Properties;* [Copper mining and smelting].—Far Eastern Rev., March,1912; 5 pp.*; 75c.

Malay

See also Siamese Peninsula.

Scrivenor, J. B.—*Rantau Panjang Coal Measures, Selangor;* [Brief abstract of report of F. M. S. Geol. Survey].—Imperial Inst., Bull., April,1912; p. 171; 250 w; 75c.

Scrivenor, J. B.—*The Geology and Mining Industries of Ulu Pahang.*—London, 1912; pp. —*; $2.50 (book).

Simmersbach, B.—*Die wichtigern Zinnerzbergbaugebiete;* [The more important tin-mining areas of the world, their ores and production].—Glückauf, Nov.25,1911, p. 1838-1847; 50c.

Thomae, W. F. A.—*In the Malay States.*—Mng. Mag., Feb.,1912; p. 132; 2000 w*; 45c.

———. *Alluvial Tin Mining.*—Mng. Mag., Apr.,1912; p. 244; 2400 w*; 35c.

———. *Der Zinnbergbau auf der Halbinsel Malakka;* [Review of tin mining in the Malay peninsula in 1909 and 1910].—Erzbergbau, Dec.1,1911, p. 319; 750 w; 35c.

———. *Equipment at Pusing Bharu Tin Mines.*—Mng. Mag., April,1912; p. 282; 750 w*; 45c.

———. *Strüverite, a Rare Tantalum Mineral from the Fed. Malay States.*—Imperial Inst., Bull., Vol. 9, No. 4;1911; p. 354; 500 w; 45c.

———. *The Chinaman as a Miner;* [His methods of tin mining in Siam and Malay; from Malayan Tin & Rubber Jnl.].—Mng. Jnl., Apr.20,1912; p. 401; 800 w; 35c.

———. *The Federated Malay States in 1911;* [Tin production].—Mng. Jnl., Jan.6, 1912, p. 30; p. 23; 500 w; tables; 35c.

Persia

See under Arabian Peninsula.

Philippines

Adams, G. I. and W. E. Pratt.—*Geologic Reconnaissance of Southern Luzon.*—Philipp. Jnl. of Sci., Dec.,1911; pp. 449-482*; 65c.

Anderson, Geo. E.—*Philippines Show Healthy Growth in Coal Output;* [from U. S. Consul. Rep.].—Mining & Engg. World, Dec.16,1911, p. 1224; 500 w; 10c.

Eddingfield, F. T.—*Pangasinan Placer.*—Mineral Resources of Philip. I'ds., 1911, p. 32; 350 w; 65c.

Eddingfield, F. T.—*Other Mineral Districts;* [Review of gold mining in 1910 in Mancayan-Suyoc, Benguet (Lubang), Nueva Ecija, Marinduque, Mindoro, Samar, Mindanao].—Mineral Resources of Philipp. I'ds., 1911; p. 33; 1000 w; 65c.

Eddingfield, F. T.— *Platinum, Copper, and Cinnabar in the Philippines .*—Mineral Resources of Philipp. I'ds., 1911, p. 36; 400 w; 65c.

Eddingfield, F. T.—*Tayabas Oil Fields.*—Mineral Resources of Philipp. I'ds., 1911; p. 64; 1200 w*; 65c.

Eddingfield, F. T.—*Cost of Mining in the Philippines.*—Mineral Resources of Philipp. I'ds., 1911; p. 73; 2500 w; 65c.

Eddingfield, F. T.—*Araroy Mineral District;* [quartz veins, Masbate I'd.].—Mineral Resources of the Philippines, 1911; p. 10-13; 2000 w*; 65c.

Eye, C. M.—*Is "Cheap" Labor Economical?* [Discusses gold mining and milling in Philippines].—M. & S. P., March30,1912; p. 476; 1500 w; 20c.

Fanning, P. R.—*Mineral Resources of Northwestern Pangasinan, Luzon.*—Mineral Resources of Phil. I'ds., 1911, p. 31; 300 w; 65c.

Fanning, Paul R.—*Paracale-Mambulao Mining District;* [Progress in gold dredging and quartz mining in 1910].—Minrl. Resources of Philippines, 1911; p. 18; 5000 w; 65c.

Ferguson, H. G.—*The Geology and Mineral Resources of the Araroy District, Masbate.*—Philipp. Jnl. of Sci., Oct.,1911; pp. 397-426*; 65c. Abstract in Mining & Engg. World, Aug.3, p. 199; 2700 w; 10c.

Freer, P. C.—*Tenth Annual Report of the Director of the Bureau of Science for the Year Ending Aug.* 1, 1911.—Manila, 1912; 67 pp.; 50c.

Hanlon, R. Y.—*Philippine Placers;* [Reviews dredging and gravel resources].—Mineral Resources of Philipp. I'ds., 1911; p. 69; 2000 w; 65c.

Janin, Chas. J.—*Gold Dredging in the Philippines.*—M. & S. P., Jan.6,1912, p. 70; 500 w*; 35c.

Park, H.—*Gold in East Luzon;* [Dredging field on Umeari river].—Australian Mng. Standd., March7,1912; p. 214; 500 w; 35c.

Pratt, W. E.—*Production of non-metallic Materials in* 1910; [Stone, sand, lime, clay products, salt, cement, beryl, spinel ruby]. —Mineral Resources of Philipp. I'ds., 1911, p. 61; 1800 w; 65c.

Pratt, W. E.—*On Briquetting Philippine Coals.*—Mineral Resources of Philipp. I'ds, 1911; p. 79; 1000 w; 65c.

Pratt, W. E.—*The Nalasvetan, Ambos Camarines, Gold District;* [Review of progress in 1910].—Minrl. Resources of Philippines, 1911, p. 26; 1000 w; 65c.

Pratt, W. E.—*Notes on the Mineral Resources of Catanduanes Island, P. I.*—Mineral Resources of Philippines, 1911; p. 28; 1000 w; 65c.

Smith, W. D.—*Geological Reconnaissance of Mindanao and Sulu: III, General Geology and Economic Geology.*—Philipp. Jnl. of Sci., Oct.,1911; pp. 359-396*; 65c.

Smith, W. D. and F. T. Eddingfield.—*Additional Notes on the Economic Geology of the Baguio Mineral District.*—Philipp. Jnl. of Sci., Dec.,1911, pp. 429-448*; 65c.

Smith, W. D.—*Developments in the Baguio District.*—Mineral Resources of the Philippines, 1911; p. 13; 1500 w*; 65c.

Smith, W. D.—*The Coal Resources of the Philippine Islands.*—Mineral Resources of Philippines, 1911; p. 37-56*; 65c.

Abstract in Iron & Coal Trades Rev., Jan.5,1912, p. 9; 1500 w; 30c.

Woolley, M.—*Coal Situation in the Philippines:*—Coal Age, May18,1912; p. 1054; 1400 w; 20c.

Russia in Asia

Assaeievf, V. P.—*Production of Copper in the Kyshtim District;* [Smelters and electrolytic works; abstract from "Gornyi Journal"].—Mng. Jnl., May4,1912; p. 438; 1200 w; 35c. Also in M. & S. P., June29, p. 891; 1000 w; 20c.

Cauldwell, F. W.—*Copper Mining and Smelting in the Caucasus;* [Caucasus Copper Co., near Batum].—U. S. Consul. Rep., Jan.6,1912; p. 95; 1400 w; 20c. Reprint in M. & S. P., Jan.27, p. 163; 20c. Also in Mng. Sci., Feb.15, p. 172; 20c. Also in Mines & Methods, March, p. 442; 20c. Also in Mining & Engg. World, June29, p. 1362; 1400 w; 10c.

Cauldwell, F. W.—*Manganese Ore in the Caucasus.*—U. S. Consul. Rep., May7,1912; p. 497; 2000 w; 20c. Reprinted in Mining & Engg. World, July13, p. 65; 10c. Also in M. & S. P., July27, p. 113; 20c.

Cirkel, F.—*Some Foreign Asbestos Deposits;* [Cyprus, Siberia, Western Australia; read to Canadian Mng. Inst.].—Mining & Engg. World, Dec.30,1911, p. 1312; 750 w; 10c.

Duparc, L.—*Le platine et les gîtes platinifères de l'Oural;* [Platinum and the platinum deposits of the Urals].—Archives d. Sci. Physiq. & Naturelles (Geneva), Vol. 31; March-June,1911; 80 pp*; $2.

Brief review in Econ. Geol'y, Feb.-March, 1912; p. 202; 750 w; 65c.

Glasenapp, M.—*Die Alibert Graphitgruben in Sibirien;* [The Alibert graphite mines in Siberia].—Riga. Industrie Ztg., Apr.30,1912; p. 123; 500 w; 35c.

Hautpick, E.—*Russia; Lena Goldfields Strike;* [Cement, iron and steel and coal in 1911].—Mng. Jnl., Apr.20,1912; p. 374; 1500 w; 35c.

de Hautpick, E.—*Russia;* [Gold and manganese in the Caucasus; Quicksilver in the Urals].—Mng. Jnl., May18,1912; p. 481; 2500 w; 35c.

de Hautpick, E.—*Siberian Tin and Graphite.*—Mng. Jnl., May25,1912; p. 512; 500 w; 35c.

Holtz, H. C.—*La composition des principaux minerais de platine de l'Oural;* [Composition of the chief platinum ores of the Urals].—Univ. of Geneva Dissertation; 1911; 66 pp.; (thesis).

Hutchins, J. P.—*The Russian Empire in* 1911; [Review of progress in mining practice; gold, platinum, iron, coal production; dredging].—E. & M. J., Jan.6,1912, p. 90; 4500 w; 25c.

Janin, Chas.—*Gold Dredging in Russia;* [Eastern Siberia; Kolchan district].—M. & S. P., Jan.6,1912, p. 66; 1600 w*; 35c.

Kryshanofsky, W. F.—*Serpentine Asbestos Deposits in the Berezowa, Kamenskaya and Manetnaya Estates, Ural, Russia.*—Canadian Mng. Inst., Bull. 18, Feb.,1912; p. 13; 800 w; $1.20.

Perret, L.—*Gold and Platinum Alluvial Deposits in Russia;* [Methods of prospecting and working].—Instn. of Mng. & Met'l'gy, Bull. 92; May,1912; 34 pp*; 50c.

Abstract on "Prospecting Frozen Alluvial Deposits," in Mining & Engg. World, June 15, p. 1247; 4000 w*; 10c. Also in Mng. Sci., June20, p. 529; 2000 w; 20c. Also in M. & S. P., June22, p. 856; 3000 w*; 20c.

Priwoznik, E.—*Ueber Platin;* [The mining metallurgy and uses of platinum].—Oestr. Zts. f. Berg- & H-wesen, March16, 1912, p. 143; March23, p. 155; 7000 w; 75c.

Purington, C. W.—*Winter Gold Mining in Siberia;* [Working of frozen gravels].—Mng. Mag., Jan.,1912, p. 50; 2800 w*; 45c.

Strischoff, J.—*Geologic structure of the oilfield south of Geran station, Transcaucasian Railroad;* [in Russian].—Ges. d. Naturforscher, Mittingn; Vol. 21, 1911; pp. 307-316*. Separately reprinted. Kiew, 1911.

Weatherbee, D'Arcy.—*Labor Conditions on the Lower Amur;* [Kolchan gold-dredging area].—Mng. Mag., March,1912; p. 197; 1500 w*; 35c.

———. *An American Copper Plant in the Caucasus;* [Describes Caucasus Copper Co. mine, milling and smelting works].—Mining & Engg. World, May18,1912; p. 1053; 2100 w; 10c.

———. *L'industrie du platine dans l'Oural en* 1911; [Platinum production in the Urals in 1911].—Métallurgie, March13,1912; p. 164; 300 w; 35c.

———. *Mineral Production of Russia;* [1910, 1911; gold, platinum, copper, zinc, pig-iron, steel, coal].—E. & M. J., Junel, 1912; p. 1074; 100 w; table; 25c.

———. *Prospects in the Primorsk;* [Coal and iron and gold fields north of Vladivostok].—Mng. Jnl., Feb.3,1912; p. 111; 1200 w; 35c.

———. *Review of Mining in* 1911; *Siberia.*—Mining & Engg. World, Jan.27,1912; p. 275; 1200 w; 25c.

———. *Russia's Copper Production.*—Mng. Jnl., Apr.20,1912; p. 380; 2000 w; 35c.

———. *Russia;* [Review for 1911].—Mng. Jnl., Jan.20.1912; p. 68; 1000 w; 35c.

———. *Russian Gold Production in* 1911.—M. & S. P., Feb.24,1912; p. 313; 1000 w; 20c.

———. *Russian Mining in* 1911; [Brief notes on coal, copper, gold, platinum, zinc,

lead and oil fields].—M. & S. P., Jan.13, 1912, p. 110; 1800 w; 20c.

———. *Russia in* 1911; [Oil, copper, gold, platinum, manganese].—Mng. Jnl., Jan.6,1912, p. 27; 2000 w; 35c.

———. *Russian Platinum Production in* 1911.—M. & S. P., March16,1912, p. 411; 500 w; 20c.

———. *The Russian Government Platinum Monopoly.*—Mining & Engg. World, Apr.13,1912; p. 820; 1500 w; 10c.

———. *Ueber die transkaukasische Kohlenindustrie;* [Notes on the Nachschiro-Tkwibul coalfield, Kutais, Transcaucasia].—Riga. Industrie Ztg., Apr.15,1912; p. 108; 600 w; 35c.

———. *Western Siberian Gold Situation; Vitim Gold District.*—Mng. Jnl., Jan.27, 1912; p. 101; 1500 w; 35c.

Siamese Peninsula

See also Malay.

Hansen, C. C.—*Gold and Precious Stone Mining and Jewelry in Siam;* [Sapphires and rubies].—U. S. Consul. Rep., Apr.23, 1912; p. 320; 500 w; 20c. Reprint in Mining & Engg. World, June15, p. 1246; 10c.

Lebrun, A.—*Nouvelle Réglementation minière de l'Indo Chine;* [New mining code for French Indo-China; from "Journal Officiel," Feb.8,1912.].—Echo d. Mines, Feb.15, 1912; p. 194; 2100 w; 35c.

———. *Le Tonkin minier;* [Mining industry in Tonkin, French Indo-China, in 1910; abstract of governor-general's report; chiefly coal and phosphate].—Echo d. Mines, Apr.1,1912; p. 408; 2400 w; 35c. Also in Soc. Amicale d. Mineurs de Douai, Bull; Apr.10, p. 222; Apr.25, p. 228; 2400 w; 50c.

OCEANIA.

Australasia

———. *Reference List for Phosphates;* [Bibliography of world's phosphate deposits].—U. S. Congress (62d), 2d Session, Senate Doc. No. 190; 1912; pp. 78-106.

Clark, D.—*Australian Mining and Metallurgy.*—Melbourne, 1911; 600 pp.*; $6.50 (book).

Hoover, H. C.—*Australian Mining Laws;* [Opposes leasing system in favor of fee simple for mineral lands].—M. & S. P., May25,1912; p. 731; 1100 w; 20c.

Mance, F. S.—*Mining in Australasia;* [Review for 1911; gold, silver-lead, zinc, copper, tin, coal].—E. & M. J., Jan.6,1912, p. 87; 3200 w; 25c.

Plummer, J.—*Increased Australian Silver Production in* 1911.—Mining & Engg. World, June1,1912; p. 1153; 1500 w; 10c.

Power, F. D.—*Coalfields and Collieries of Australia.*—Melbourne, 1911; 300 pp*; $7.00 (book).

Simmersbach, B.—*Die wichtigern Zinnerzbergbaugebiete;* [The more important tin-mining areas of the world, their ores and production].—Glückauf, Nov.25,1911, p. 1838-1847; 50c.

Veatch, A. C.—*Mining Laws in Australia and New Zealand;* [With special reference to the leasing system].—U. S. Geol. Survey, Bull. 505; 1911; 180 pp.; 10c.

Williams, G. W.—*Distribution of Gold in Australia; A Review and a Forecast.*—Australian Mng. Standd., Nov.23,1911, p. 521; Nov.30, p. 547; Dec.7, p. 571; 9200 w; 75c.

———. *Australia in* 1911; [Silver, lead, zinc, copper, tin, radium, tungsten, coal].—Mng. Jnl., Jan.13,1912, p. 38; 1400 w; 35c.

———. *Australian Gold Output;* [Discusses continued decline].—Australian Mng. Standd., Feb.29,1912; p. 185; 800 w; 35c.

———. *Australasian Mining in* 1911; [Review of leading goldfields; also copper, silver-lead-zinc, coal].—M. & S. P., Jan.6, 1912, p. 56; 2400 w*; 35c.

———. *Commonwealth Iron Bounty.*—Australian Mng. Standd., Nov.23,1911, p. 516; 2400 w; 35c.

———. *Die Superphosphatindustrie Australiens;* [The superphosphate industry in Australia].—Chem. Industrie, Feb.1,1912; p. 80; 200 w; 50c.

———. *Gold Production of Australia in* 1911; [Production monthly in each state].—Mining & Engg. World, Feb.24,1912; p. 467; 500 w; tables; 10c.

———. *Statistics of Mineral Production of Australia in* 1910; [By states and materials, values].—Australian Mng. Standd., March21,1912; p. 262; table; 35c.

———. *The Australian Oversea Coal Trade;* [Exports and imports by countries annually, 1906 to 1910, incl.].—Coll'y Guardn., Jan.12,1912; p. 91; 1000 w; tables; 30c.

NEW SOUTH WALES

Brown, M.—*Australian Coal in the Eastern Markets.*—Australian Mng. Standd., Nov.30, 1911, p. 548; 1000 w; 35c.
Abstract in Mining & Engg. World, Feb. 24,1912; p. 450; 1000 w; 10c.

Clark, D.—*The Great Cobar, Ltd.;* [Describes the mines, mining, roasting, pyritic smelting, refining and electrolytic works].—Australian Mng. Standd., Oct.12, 1911, p. 366; Oct.19, p. 393; Oct.26, p. 419; 12,000 w*; 65c.

Durell, C. T.—*Flotation of Zinc Ores.*—M. & S. P., May25,1912; p. 717; 1000 w; 20c. Reprint in Colo. School of Mines Mag., June, p. 199; 50c.

Grove, Dan.—*Diamonds, Their Occurrence at Copeton, N. S. W.*—Australian Mng. Standd., Apr.11,1912; p. 331; 1200 w; 35c.

Mickle, K.—*Flotation of Minerals; Part* 2; [Special reference to tests on Broken Hill, N. S. W. ores and concentrates].—Roy. Soc. of Victoria, Proc., Vol. 24, Part 2; March,1912; 29 pp.*; $5.
Reprint in Australian Mng. Standd., Apr. 11,1912; p. 333; April18, p. 357; Apr.25, p. 381; May2, p. 403; 9000 w*; 80c. Abstract in M. & S. P., July6, p. 12; 2700 w*; 20c. Also in E. & M. J., July13, p. 71; 7500 w; 25c.

Paul, F. W.—*New South Wales Iron Industry.*—Australian Mng. Standd., Nov.2, 1911, p. 442; 3000 w; 35c. Also in Iron & Coal Trades Rev., Dec.8,1911, p. 927; Jan.5,1912, p. 5; 6000 w; 50c.

Pittman, E. F.—*The Mineral Industry of New South Wales During* 1911; [Preliminary official report; silver-lead-zinc, copper, gold, tin, coal, tungsten].—Australian Mng. Standd., Jan.11,1912; p. 26; 1400 w; 35c.
Also in Mng. & Engg. Rev., March, p. 246; 2400 w; 35c. Also reviewed in London Mng. Jnl., May25, p. 505; 2500 w; 35c.

Poole, W.—*Treatment of Broken Hill Ores;* [Milling and metallurgy of lead-zinc ore carrying gold and silver; I: Grinding and concentration; II Various sintering processes; III: Port Pirie blast-furnace; IV: Refining base bullion; V: Zinc crusts and drosses; read to Sydney Univ. Engg. Soc.; abstract].—Mines & Minerals; (1

Nov.,1911, p. 227; 7000 w*; (2) Dec., p. 315; 5000 w*; (3) Jan.,1912, p. 381; 3600 w*; (4) Feb., p. 423; 5000 w*; (5) March, p. 498; 6000 w*; $1.45.

Wilson, J. B.—*A Broken Hill Problem: What Has Become of the Zinc?* [Discusses economic and geologic significance of deficiency of zinc in Broken Hill, N. S. W., oxidized zone].—Australian Mng. Standd., Dec.7,1911, p. 565; 2000 w; 35c.

British Australian Oil Co.—*Engineers' Report;* [Describes oil-shale industry in New South Wales].—Australian Mng. Standd., Jan.18,1912; p. 55; 2500 w; 35c.

———. *Abermain No. 2 Colliery, West Maitland.*—Australian Mng. Standd., March 7,1912; p. 214; 1200 w; 35c.

———. *Australian Diamonds.*—Mng. World (London), Dec.9,1911, p. 737; 500 w; 35c.

———. *Electric Smelting of Lead-Zinc Ores at Sarpsborg, Norway, and at Trollhättan, Sweden;* [ores from Broken Hill, N. S. W.].—Chemi. Engr., Dec.,1911; p. 510; 1000 w; 35c.

———. *Emmaville Tin Field, N. S. W.* [Recent Dredging Progress].—Australian Mng. Standd., Nov.30,1911, p. 548; 1000 w; 35c.

———. *New South Wales State Coal Mine;* [Abstract of speech before Legislative Assembly favoring proposed measure].—Australian Mng. Standd., March7,1912; p. 209; 800 w; 35c.

———. *Murex Magnetic Co., Ltd.;* [Report of Chairman].—Mng. Jnl., Dec.23,1911, p. 1258; 8000 w; 35c.

———. *Rescue Stations in Coal Mining Districts: Action in New South Wales.*—Australian Mng. Standd., Dec.14,1911, p. 590; 900 w; 35c.

———. *Shifting a Bucket Dredge;* [Bodily moving of equipment half a mile in Marysville field, N. S. W.].—Australian Mng. Standd., Nov.16,1911, p. 495; 1000 w*; 35c.

———. *Wolfram Mining in Australia;* [Fielder's Hill district, northern N. S. W.].—Mng. Mag., Jan.,1912, p. 44; 400 w; 45c.

NEW ZEALAND.

Baker, H. D.—*Greenstone Discovery in New Zealand;* [Bowenite near Milford Sound, South Id.].—U. S. Consul. Rep., Feb. 28,1912; p. 856; 800 w; 20c.

Buckland, A. C.—*The West Coast Sounds of New Zealand.*—Mng. & Engg. Rev., Jan., 1912; p. 155; 1200 w*; 35c.

Brown, F. C.—*New Zealand and Nevada Mining Methods Compared;* [Compares wages, labor conditions and details of mining and milling].—M. & S. P., Jan.13,1912, p. 104; 1800 w; 20c.

Castle, W.—*Future of Oil in New Zealand.*—Oil Age, March8,1912, p. 1; 1000 w; 20c.

Fotheringham, J.—*The Minimum Wage; a New Zealand Example.*—Coll'y Guardn., Feb.23,1912; p. 388; 1000 w; 30c.

Jarman, A.—*Mining and Ore Treatment at the Talisman Mine, Karangahake, N. Z.;* [Read to Australasian Inst. Mng. Engrs.; abstract].—Mng. & Engg. Rev., Feb.5,1912; p. 193; 8000 w*; 45c. Also in Mines & Minerals, Feb.; p. 443; 4800 w*; 35c. Abstract on cyaniding in Met. & Chem'l Engg., April,1912; p. 242; 1000 w; 35c.

Macdonald, A. G.—*Dredging at Waikaia, N. Z.*—E. & M. J., Dec.9,1911, p. 1141; 500 w*; 25c.

Magee, J. G.—*New Zealand's Sulphur Deposits;* [White I'd., Bay of Plenty].—Australian Mng. Standd., Apr.25,1912; p. 380; 500 w; 35c.

Morgan, P. G.—*The Geology of the Greymouth Subdivision, North Westland, N. Z.*—N. Z. Geol. Surv., Bull. 13, 1912; 159 pp*; $1.50.

Penrose, R. A. F.—*Kauri Gum Mining in New Zealand.*—Jnl. of Geol'y, Jan.-Feb., 1912; p. 38-44*; 80c.

Reed, F.—*Coal Mining in New Zealand in* 1910; [Abstract of official report].—Coll'y Guardn., Jan.26,1912; p. 177; 1500 w; 30c.

Reed, F.—*A Submerged Flexible-Joint Main;* [Carrying a placer-mining conduit under the rapid Taramakau river, N. Z.].—Instn. of Mng. & Met'l'gy, Bull. 88, Jan., 1912; p. 1-9*; 50c. Abstract in Engg. News, Apr.4,1912; p. 641; 2000 w*; 25c.

Sharpley, H.—*The Blackwater Mine;* [Gold mining and milling on South I'd, N. Z.].—Mng. Mag., Dec.,1911, p. 448; 800 w; 35c.

Veatch, A. C.—*Mining Laws of Australia and New Zealand;* [With special reference to the leasing system].—U. S. Geol. Survey, Bull. 505; 1911; 180 pp.; 10c.

Wilson, W.—*Some Hydro-Electric Power Plants in New Zealand.*—Mng. & Engg. Rev., March,1912; p. 263; 1500 w*; 35c.

———. *Coal Mining in New Zealand;* [Abstract of official report for 1910].—Sci. & Art of Mng., Apr.27,1912; p. 437; 500 w; 35c.

———. *New Zealand Mine Regulations;* [on safety, sanitation and ventilation].—Mng. Jnl., June15,1912; p. 555; 2100 w; 35c.

———. *New Zealand Mining;* [Abstract of official report for 1910; coal, gold].—Mng. Jnl., Apr.6,1912; p. 321; 1600 w; 35c. Also in Indian & Eastn. Engr., April, p. 121; 1000 w; table; 35c.

———. *New Zealand;* [Review for 1911.—Mng. Jnl., Feb.10,1912; p. 133; 1200 w; 35c.

———. *Scheelite in New Zealand;* [Macraes district, central Otago].—Australian Mng. Standd., Apr.4,1912; p. 309; 500 w; 35c.

———. *The Waihi Hydro-Electric Plant.*—Mng. & Engg. Rev., Jan.,1912; p. 184; 500 w*; 35c. Also in Indian & Eastn. Engr., April,1912, p. 134; 500 w*; 35c.

NORTHERN TERRITORY

———. *The Northern Territory in* 1911; [Tin, tungsten, copper, gold].—Mng. Jnl., Jan.27,1912; p. 87; 1500 w; 35c.

PAPUA

Allen, A. W.—*Possibilities of British Papua.*—M. & S. P., Apr.27,1912; p. 583; 2000 w*; 20c.

———. *Papuan Mining;* [Gold and copper output, 1911; from territorial report].—Mng. & Engg. Rev., April,1912; p. 289; 500 w; 35c.

QUEENSLAND

Ball, L. C.—*Coal on the Oakey-Cooyar Railway.*—Queensland Govt. Mng. Jnl., April,1912; p. 158; 1200 w*; 35c.

Ball, L. C.—*Occurrence of Tinstone in the Burnett District.*—Queensl. Govt. Mng. Jnl., March,1912; p. 107; 4000 w*; 35c.

Ball, L. C.—*Old Brovinia Goldfield.*—Queensl. Govt. Mng. Jnl., March,1912; p 111; 500 w*; 35c.

Ball, L. C.—*Mines in the Parish of Taromeo;* [Gold-copper and silver-lead].—Queensl. Govt. Mng. Jnl., March,1912; p. 111; 750 w*; 35c.

Ball, L. C.—*Wolfram and Molybdenite in Queensland;* [Summary notes on the various fields].—Queensl. Govt. Mng. Jnl., Oct.14,1911, p. 504; Nov., p. 564; 8000 w*; 50c.

Ball, L. C.—*Mount Miller Manganese Mine.*—Queensl. Govt. Mng. Jnl.. Dec.,1911, p. 615; 300 w; 35c.

Burns, A. W.—*Charters Towers, Queensl., Mining in* 1911; [Statistics of gold and copper output].—Australian Mng. Standd., Feb. 29,1912; p. 195; 1000 w; 35c.

Coventry, Tom.—*The Weathering of Coal Seams;* [Dawson-Mackenzie coalfield, Queensland].—Mines & Minerals, Dec.,1911, p. 273; 2000 w*; 35c.

Greenfield, W. H.—*Map of the Cape York Peninsula Gold and Mineral Fields, Queensland.*—Queensl. Geol. Survey, Publ. No. 233; 1911.

Greenfield, W. H.—*Map of the Croydon and Etheridge Goldfields, Queensland.*—Queensl. Geol. Surv., Publ. No. 230; 1911.

Jackson, C. F. V.—*Mount Mulligan Coal;* [Report of Queensland state mining engineer].—Qu. Govt. Mng. Jnl., Jan.,1912; p. 7; 5000 w; 35c. Abstract in Australian Mng. Standd., Jan.25, p. 76; 1800 w; 35c.

Jackson, C. F. V.—*Proposed Malbon-MacGregor Railway;* [Government report on mineral deposits along the route].—Qu. Govt. Mng. Jnl., Jan.,1912; p. 13; 2500 w*; 35c. Abstract in Australian Mng. Standd., Feb.1, p. 100; 500 w*; 35c.

MacDonald, A. R.—*The Queensland Mining Industry; Review of the Year* 1911; [Annual report of Under Secretary for Mines; gold, silver-lead, copper, tin, tungsten, molybdenum, bismuth, gems; coal].—Qu. Govt. Mng. Jnl., March,1912; pp. 89-103*; 45c. Abstract in Australian Mng. Standd., Apr.4, p. 309; Apr.11, p. 330; 3500 w; 50c.

Marks, E. O.—*Some "Outside" Charters Towers Mines.*—Queensl. Govt. Mng. Jnl., April,1912; p. 148; 3000 w*; 35c.

Pearce, W. C. W.—*The "Glen" Bismuth Mines, North Queensland;* [Bismuth-tungsten mining and treatment, Heberton district].—Instn. of Mng. & Met'l'gy, Bull. 87, Dec.,1911, pp. 1-5*; 1600 w; 50c. Abstract in Mining & Engg. World. Nov.4,1911, p. 918; Jan.13.1912; p. 71; 2500 w*; 20c.

Stone, S. R.—*The Conservation of Water for Hydraulic Sluicing;* [Instances of impounding small streams in Queensland placer districts].—Mining & Engg. World, June1,1912; p. 1135; 2500 w*; 10c.

———. *Map of the Goldfields in the Vicinity of Charters Towers, Queensland.*—Queensl. Geol. Surv., Publ. No. 236; 1911.

———. *Mining in Queensland: Mt. Carbine Wolfram Field.*—Australian Mng. Standd., Oct.26,1911, p. 417; 1000 w; 35c.

———. *Peninsula Gold Mining Syndicate; Sluicing Works on the Palmer River.*—Queensl. Govt. Mng. Jnl., Dec.,1911, p. 618; 1000 w*; 35c.

———. *South Australia;* [Statistics of production, July to Dec., 1911; gold, silver, silver-lead, copper, lead, iron, phosphate rock, salt].—Mng. Jnl., May4,1912; p. 426; 1000 w; 35c.

SOUTH AUSTRALIA

Gee, L. C. E.—*Uranium (Radio-Active) Ores and Other Rare Metals and Minerals in South Australia.*—S. Austral. Dept. Mines Publication; 1911; 12 pp; 50c.

German abstract in Eisen Ztg., Feb.3, 1912; p. 80; 600 w; 35c. Also in Erzbergbau, Apr.1, p. 129; 600 w; 35c.

Italian abstract in Rassegna Mineraria, March21,1912, p. 175; 1000 w; 35c.

———. *South Australian Iron.*—Mng. Jnl., Dec.9,1911, p. 1187; 500 w; 35c.

TASMANIA

Greenway, T. J.—*Tasmanian Oil Shale;* [Methods and expected costs].—Australian Mng. Standd., Feb.8,1912; p. 122; 1800 w; 35c.

Ward, L. K.—*Mt. Balfour Mining Field;* [Tin-tungsten and copper]. — Australian Mng. Standd., Apr.25,1912; p. 382; 2000 w; 35c.

———. *Mineral Production of Tasmania* [for 1910].—Mining & Engg. World, March 2,1912; p. 510; 100 w; table; 10c. Also in Mng. Jnl., March16, p. 245; 1000 w; table; 35c.

———. *Tasmanian Mining Act Amendment.*—Australian Mng. Standd., Nov.9, 1911, p. 459; 1000 w; 35c.

VICTORIA.

Bradford, Wm.—*The Ararat Valley.*—Mng. & Engg. Rev., Apr.3,1912; p. 285; 3600 w*; 35c.

Broome, G. H.—*History of Victoria State Coal Mines.*—In F. D. Power's "Coalfields and Collieries of Australia", pp. 374-383*.

Clark, C. M.—*The State Coal Mine, Wonthaggi;* [From the "I. C. S. Student"].—Coll'y Guardn., Apr.26,1912; p. 833; 1500 w; 35c.

Dunn, E. J.—*Limonite near Dookie, Victoria.*—Australian Mng. Standd., Apr.18, 1912; p. 356; 500 w; 35c.

Dunn, E. J.—*Tin Ore at Beechworth, Vict.*—Australian Mng. Standd., Jan.18, 1912; p. 50; 1800 w; 35c.

Dunn, E. J.—*Mineral Springs of Victoria.*—Australian Mng. Standd., Jan.4,1912; p. 6; 1000 w; 35c.

Janin, Chas.—*Review of Gold Dredging in* 1911.—M. & S. P., Jan.13,1912, p. 101; 3000 w*; 20c.

Meudell, W. G.—*Gold Mining in Victoria;* [Statistics of companies in operation and promoted, yearly, 1901-1911].—Vict. Chamber of Mines, Jnl.; Feb.,1912; p. 126; 500 w; 35c.

Nicol, W. J.—*Slimes Treatment at the Lord Nelson Mine;* [St. Arnaud, Vict.].—Mng. & Engg. Rev., Apr.,1912; p. 290; 2100 w*; 35c. Reprint in Minning & Engg. World, Aug.3, p. 189*; 10c.

Pabst, V.—*New Specimen Hill, Daylesford.*—Australian Mng. Standd., Nov.23, 1911, p. 515; 1100 w; 35c.

Pabst, V.—*North Nuggety Ajax Mine, Daylesford, V.*—Australian Mng. Standd., May2,1912; p. 402; 2000 w; 35c.

Rickard, T. A.—*The Saddle Reef;* [Geology and genesis of Bendigo, Vict., ore bodies].—"Types of Ore Deposits," by H. F. Bain, and others; 1911; pp. 172-189*.

Rowe, H. E.—*The State Coal Mine and State Socialism;* [Discusses alleged failure in Victoria].—Vict. Chamber of Mines, Monthly Rep., Jan.,1912; Feb.,1912; 7500 w; $1.20.

———. *Victorian Miners' Wages;* [Discusses award of State Wages Board on minimum wage question].—Australian

Mng. Standd., Feb.1,1912; p. 89; p. 99; 3000 w; 35c.

WESTERN AUSTRALIA

von Bernewitz, M. W.—*Customs Treatment at Kalgoorlie;* [Sampling, roasting and milling at Associated Northern Blocks mine and mill].—Mng. & Engg. Rev., March, 1912; p. 239; 2700 w*; 35c.

von Bernewitz, M. W.—*Ore Treatment at the Associated Mine, Kalgoorlie;* [Roasting and cyaniding sulpho-tellurides].—Mng. Mag., Feb.,1912; p. 127; 3000 w*; 45c. Reprint in W. Australian Mng., etc., Jnl., March16, p. 7; 3000 w; 35c.

von Bernewitz, M. W.—*Manufacture of Superphosphate in Western Australia.*—Mng.& Sc. Press, Oct.28,1911, p. 551; 1000 w*; 20c. Abstract in W. A. Mng. etc. Jnl., Dec.23,1911, p. 5; 1000 w; 50c.

German abstract in Zentralbl. f. Kunstdünger-Ind., May21, p. 154; 500 w; 35c.

von Bernewitz, M. W.—*Coolgardie and Ora Banda.*—W. Australian Mng. etc. Jnl., Nov.11,1911, p. 6; 1000 w; 35c.

Bosustow, A.—*Associated Mine, Kalgoorlie; Electric Winding Plant.*—Australian Mng. Standd., Nov.2,1911, p. 438; 1600 w; 35c.

Castilla, H. C.—*Artesian Boring; Its Inception and Progress in Western Australia;* [Read to W. Aust. Instn. of Engrs.; abstract].—W. A. Mng., etc., Jnl., March16, 1912; p. 14; 1000 w; 35c.

Cirkel, F.—*Some Foreign Asbestos Deposits;* [Cyprus, Siberia, Western Australia; read to Canadian Mng. Inst.].—Mining & Engg. World, Dec.30,1911, p. 1312; 750 w; 10c.

Cowper, H. A.—*West Australian Coal Industry; A Collie Mining Property;* [Collie plateau].—Australian Mng. Standd., Jan. 4,1912; p. 5; 2500 w; 35c.

Edmands, H. R.—*Cyaniding Weathered Pyritic Tailing;* [Mulline, W. Australia].—E. & M. J., March23,1912; p. 605; 2800 w; 25c. Abstract in Cheml. Met. & Mng. Soc. of S. Afr., Jnl., May,1912; p. 485; 1800 w; 90c.

Farquharson, R. A.—*Observations on Some Rocks from the Ingliston Extended Mine, Meekatharra, Murchison Goldfield.*—W. Australian Mng, etc., Jnl., March16, 1912; p. 12; March23, p. 12; 5500 w; 50c.

Larcombs, C. O. G.—*Notes on the Geology of Kalgoorlie.*—Australasian Inst. Mng. Engrs., Memoirs; 1911; 308 pp*.

Review in Australian Mng. Standd., Jan. 18,1912; p. 49; Jan.25, p. 75; 4000 w; 50c.

Loring, E. A.—*Contract System;* [Reviews successful use in Western Australia].—Mng. Mag., Jan.,1912, p. 49; 800 w; 45c.

Maitland, A. Gibbs.—*The Artesian Water Supply of Western Australia;* [Read to W. A. Instn. of Engrs.].—W. A. Mng. etc. Jnl., Feb.10,1912; pp. 8-15*; 45c.

McDermott, J.—*The Lane Mill; Report on Operations at Cue.*—W. A. Mng.. etc.. Jnl., Jan.13,1912; p. 12; 2500 w; 50c. Reprint in Los Angeles Mng. Rev., March23, p. 7; 20c. Also in Salt Lake Mng. Rev., March30, p. 19; 25c.

Semple, C. S.—*Government Aid to Miners;* [Discusses state-aided custom mills and Western Australia system].—E. & M. J., Dec.23,1911, p. 1213; 1600 w; 25c.

Talbot, H. W. B.—*Preliminary Report on the Country North of Lake Giles.*—W. A. Mng., etc., Jnl., Nov.4,1911, p. 7; 2500 w; 35c.

Woodward, H. P.—*The Nemesis Mine and Kohinoor South;* [Murchison goldfield].—W. A. Mng. etc. Jnl., Dec.16,1911, p. 12, p. 13; 2100 w; 35c.

Royal Commission, W. Australia.—*Miners' Lung Diseases;* [Report of commission].—W. A. Mng. etc. Jnl., Dec.9,1911, p. 4; 2800 w; 50c. Abstract in S. Afr. Mng. Jnl., Apr. 6,1912, p. 197; 2000 w; 35c.

W. Australia; Chamber of Mines of.—*Annual Report for* 1911.—W. Australia Chamber of Mines, Jnl; Jan.,1912; pp. 345-349; 4000 w; 90c. Also in W. Australian Mng., etc., Jnl., March30,1912; p. 4; 2500 w; 35c. Also in London Mng. Jnl., Apr.6, p. 322; 4000 w; 90c.

———. *Dust in Dry Crushing Plants;* [Reviews crushing and conveying practice at Kalgoorlie, W. A.].—Australian Mng. Standd., Nov.16,1911, p. 496; 1600 w; 35c.

———. *Mining in* 1911; [Review for W. A.]—W. A. Mng., etc., Jnl., Jan.6,1912; p. 10; 2200 w; 35c.

———. *Western Australia in* 1910; [Abstract of annual government report].—Mng. Jnl., Dec.2,1911, p. 1159; 1800 w; 35c.

———. *Western Australia in* 1911.—Mng. Jnl., Jan.6,1912, p. 10; 4000 w; 35c.

———. *W. A. in* 1911; [Gold, copper, tin, coal, tantalite].—W. Australia Chamber of Mines, Jnl; Jan.,1912; pp. 345-349; 4000 w; 90c.

Polynesia

For Papua, see under Australasia.

Cochrane, N. D.—*Rocks of Fiji.*—1911; Fiji Legislative Council pamphlet.

Winship, N.—*Phosphate Industry of Makatea.*—U. S. Consul. Rep., Jan.3,1912; p. 42; 500 w; 20c.

———. *Guano Lager auf der Insel Assumption;* [Guano deposits of Assumption I'd, Aldabra group, Seychelles].—Zentralbl. f. Kunstdünger-Ind., March7,1912; p. 70; 1800 w; 35c.

Also in English in Amer. Fertilizer, March 23, pp. 54-58; 25c.

———. *L'Exploitation de la Société de Nickel de Thio;* [Thio nickel smelter and mining developments, New Caledonia].—Bull. du Commerce de N. Calédonie, Feb. 17,1912; Supplement; 300 w; 35c. Abstract in Mining & Engg. World, Apr.27, p. 902; 200 w; 10c.

———. *La situation minière de la Nouvelle Calédonie;* [Mining in New Caledonia in 1910; abstract from report of French minister of colonies].—Echo d. Mines, Oct. 12,1911, p. 1015; 2000 w; 35c. Reprint in Jnl. du Four Electriq., Oct.15, p. 988; 2000 w: 35c. Also in Soc. Amicale d. . . Mineurs de Douai, Bull., Nov.25,1911; pp. 754-761; 35c.

———. *L'année commerciale* 1911; [Review of mining and metallurgy in New Caledonia in 1911; nickel, chrome, copper, lead, iron, guano, tar].—Bull. du Commerce N. Calédonie, Apr.6,1912; p. 1-4; Apr.20. p. —; 75c. Abstract in Echo d. Mines, June3, p. 642; 1000 w; 35c.

———. *Phosphate Industry of Makatea Ocean and Nauru Islands.*—Amer. Fertilizer, Jan.13,1912, p. 56; 1500 w; 25c.

II. ORES AND MINERAL PRODUCTS

CLASSIFIED BY SUBSTANCES, INCLUDING UNDER EACH SUBSTANCE LITERATURE BEARING ON ITS OCCURRENCES, EXTRACTION, METALLURGY OR TREATMENT, USES, ETC.

(a) Metals and Metal Ores.

CHAPTER III.—ALLOYS; ALUMINUM-COPPER (Inclusive).

Alloys (Non-ferrous)

BRASSES, BRONZES AND COPPER ALLOYS

Anderson, J. R.—*Some Good Brass Alloys;* [From "Southern Machinery"].—Mechl. World, Apr.19,1912; p. 189; 1000 w; 35c.

Bassett, W. H.—*Need of Special Alloys for Special Purposes;* [Use and abuse of brasses and bronzes].—Jnl. of Indl. & Engg. Chem'y, March,1912, p. 167; 2500 w; 65c.

Bengough, G. D.—*A Study of the Properties of Alloys at High Temperatures;* [Read to Instn. of Metals].—Engnrg., Jan.19,1912, p. 90, p. 93; Feb.2, p. 166; 10,000 w*; 50c.

Carpenter, H. C. H.—*Further Experiments on the Critical Point at 470°C. in the Copper-Zinc Alloys;* [Discussion before Instn. of Metals].—Engnrg., Jan.19,1912, p. 89; Feb.23, p. 265; 7000 w*; 45c.

The paper is published in Internatnl. Zts. f. Metallogr., April,1912; pp. 152-171*; 95c.

Gaines, R. H.—*Monel Metal.*—Jnl. of Ind'l & Engg. Chem'y, May,1912; p. 354; 4000 w; 65c. Reprinted in Cheml. Engr., July, p. 32; 3500 w; 35c.

Gowland, W.—*Copper and Its Alloys in Early Times;* [Presidential address, Instn. of Metals; abstract].—Engg., Jan.19,1912, p. 87; 1000 w; 30c.

Jänecke, E.—*Die Legierungen von Gold, Silber, Kupfer;* [The alloys of gold-silver-copper].—Zts. f. angew. Chemie, May10, 1912; pp. 935-938; 45c.

Japing, Ed.—*Kupfer und Messung, etc.;* [Copper and brass and the other technically important copper alloys, their production, properties and preparation for metal ware].—Vienna, 1911 (2d edition, by H. Krause); 215 pp; 49 figs; $1.25, (book).

Johnson, F.—*The Influence of Tin and Lead on the Micro-Structure of Brass;* [Read to Instn. of Metals; abstract].—Engnrg., Jan.19,1912, p. 91; March15, p. 361; 1500 w*; 50c.

French abstract in Rev. de Métal'gie, June,1912; p. 302; 2000 w*; $1.15.

Kühl, H.—*Die Geschichte der Bronzegiesserei der alten Welt;* [History of bronze casting in ancient times].—Giesserei Ztg., Feb.15,1912, p. 119; March1, p. —; 2500 w; 60c.

Leyde, O.—*Mise en briquettes des tournures métalliques et leur valeur en fonderie de fer et de bronze;* [Briquetting of metal scrap in iron and brass foundries; various methods; from "Stahl & Eisen"].—Rev. de Mét'l'gie, Jan.,1912; p. 37-43*; $1.15.

Masselon, R.—*Les bronzes magnétiques;* [The magnetic bronzes].—Métallurgie, Dec. 13,1911, p. 787; 750 w; 35c.

Marteil, V.—*Alliages et Fonderie de Bronze;* [Bronze alloys and foundry practice].—Paris, 1912; 190 pp.; 127 figs.; $2.50 (book).

von Miller, H.—*Studien über die Einwirkung der wichtigeren metallischen und nichtmetallischen Zusätze auf normale Kuper-Zinn-Bronze;* [Effects of adding some of the commoner metals and materials to copper-tin-bronzes].—Metallurgie, Jan.22,1912; p. 63-71*; 50c.

Portevin and Nusbaumer.—*Essais sur l'usure des bronzes;* [Tests illustrating the influence of chemical composition on the wear of bronzes].—Rev. de Mét'l'gie, Feb., 1912; pp. 61-77*; $1.15.

Vickers, C.—*A New Alloy of High Tensile Strength;* [Copper with chromium and aluminum; from "The Foundry"].—Mechl. World, May24,1912; p. 245; 1100 w; 35c.

———. *A Brass Foundry of Modern Appointments;* [Eynons-Evans Mfg. Co. plant, Phila; 2,000,000 lbs. annual capacity].—Iron Age, May23,1912; p. 1257; 2000 w*; 30c.

———. *Blowholes in Composition and Bronze Castings;* [From "Brass World"].—Mechanical World, March8,1912; p. 112; 1600 w; 35c.

———. *Economizing of Fuel in the Melting of Brass.*—Castings, Jan.,1912, p. 101; 500 w*; 25c.

———. *The Manufacture of Brass and Copper at the Plants of Bassé & Selve, Altena, Germany.*—Brass World, May,1912; 9½ pp.*; 20c.

ALUMINUM ALLOYS

Jacquier, G.—*A New Non-Corrosive and Bullet-Proof Metal;* ["Argilite," an aluminum-copper-bismuth-silicon alloy].—S. Afr. Mng. Jnl., Apr.13,1912; p. 258; 1000 w; 35c.

Masselon, E.—*Fonderie de bronze d'aluminium;* [Preparation of aluminum bronze in the foundry].—Métallurgie, Jan.17,1912; p. 35; 750 w; 35c.

Rosenhain, W., and S. L. Archbutt.—*Alloys of Aluminum and Zinc;* [10th report to committee of Instn. of Mechl. Engrs., with appendix on a *Ternary Alloy of Aluminum with Zinc and Copper*].—Engnrg., Apr.26,1912; p. 578; p. 547; 8000 w; 30c. Also abstracted in Iron & Coal Trades Rev., Apr.26, p. 650; 4500 w; 35c.

Steiner, D.—*Die Hysteresisverluste der*

ferromagnetisierbaren Manganaluminium-bronzen in Abhängigkeit von den Frequenz des Wechselfeldes; [Hysteresis losses in the magnetic manganese-aluminum-bronze alloys in their relation to the frequency of the alternating field].—Darmstadt Techn. Hochschule dissert., 1911; pp. —; (thesis).

Whitney, W. R.—*Alloys;* [Discusses recent and possible future utilization of rarer metals].—Amer. Brass Founders' Asso., Trans., Vol. 5,1911, p. 44-62; 50c. Also in Amer. Foundrym. Asso., Trans, May,1911, p. 413; 2500 w; 20c.

Abstract in Castings, July,1911, p. 171; 2500 w; 20c. Also in Metal Ind'y, July, p. 293; 2500 w; 20c. Also in Mining & Engg. World, Sept.30, p. 643; 2200 w; 10c. Also in Chem. Engr., Oct.,1911, p. 397; 2500 w; 35c. Also in Engg. News, Nov.16, p. 606; 3000 w; 25c. Also in Mechl. World, Dec.29, 1911, p. 310; 1800 w; 35c.

I. K.—*Aluminium Legierungen;* [Use of aluminum in various commercial alloys].—S. W. Deu. Industrie Ztg., Jan.23,1912; p. 35; 1200 w; 35c.

———. *The Properties of Duraluminium.*—Mechanical World, May3,1912; p. 209; 500 w; 35c.

———. *Producing Lightweight Alloys.*—Mining & Engg. World, Feb.24,1912; p. 449; 800 w; 10c.

ANTIMONIAL ALLOYS

Goldberg, G.—*Einfluss der Umschmelzung und Abkühlung auf die chemischen und mechanischen Eigenschaften von Lagermetallen;* [Influence of remelting and cooling of bearing metals on their chemical and mechanical properties].—Giesserei Ztg., Jan. 15,1912; p. 41; Feb.1, p. 83; 3500 w*; 50c.

Norlin, E.—*Metod för analys af hvitmetaller;* [Methods of analysis of white metal, lead-antimony alloys].—Jernkontor. Annaler, Bihang; Feb.15,1912; pp. 91-112*; 45c.

Parravano, N., and P. de Cesaris.—*Die Arsen-Antimon Legierungen;* [The arsenic-antimony alloys and compounds].—Internat. Zts. f. Metallogr., Jan.,1912; pp. 70-75; 95c.

Wemple, L. E.—*New Process for Refining Antimonial Lead;* [Babbitt, type and bearing metals; from Brass World].—Mining & Engg. World, Feb.10,1912; p. 356; 600 w*; 10c.

———. *Traitement des minerais sulfurés d'antimoine et d'arsenic;* [Treatment of antimony and arsenic sulphides].—Rev. d. Produits Chimiq., March1,1912; p. 478; 1000 w; 75c.

GENERAL AND MISCELLANEOUS

Barth, O.—*Die Erhöhung der chemischen Widerstandsfähigkeit mechanisch noch gut bearbeitbarer, für Konstruktionszwecke verwendbarer Legierungen;* [Increasing the chemical resistivity, without diminishing the mechanical efficiency or workableness, of metal alloys available as structural material; 1: Addition of cobalt to bronzes; 2: Cerium to aluminum].—Metallurgie, Apr. 22,1912; p. 261-276*.

Friedrich, K. and A. Leroux.—(1) *Silber und Schwefelsilber;* (2) *Blei und Silber;* (3) *Kupfer, Silber und Blei;* [Alloys and smelter compounds of (1) silver and silver-sulphides, (2) lead-silver, (3) copper-silver-lead].—Inst. f. Metallographie, etc., an Freiberg, Mittlngn. f. 1910; (1), pp. 47-56*; (2), pp. 57-65*; (3), pp. 117-138*; $3.20.

Guertler, W.—*Die praktische Bedeutung* [Practical applications of metallography for the alloys-foundryman; read to Ver. Deu. Giessereifachleute, Berlin section].—Giesserei Ztg., March1,1912; p .137; March15, p. 177; 10,000 w*; 50c.

Gürtler, W.—*Theoretisches zur Konstitution der Zinn-Kadmium Legierungen;* [Theoretic notes on the metallurgy of the tin-cadmium combinations; discusses Schleicher's paper].—Internat. Zts. f. Metallogr., Jan.,1912; p. 90-103*; April, p. 172-177*; $1.50.

Kaiser, Ed. Wilhelm.—*Zusammensetzung der gebräuchlichen Metallegierungen;* [Composition of all the alloys in use in the arts and industries].—Metallurgie, May8, 1911, pp. 257-268; May22, pp. 296-308; 5000 w; tables; $1.00. Also published separately; Halle, 1911; 26 pp.; $1.

Kloss, H.—*Ueber Neusilber- und ähnliche Legierungen;* [German silver and similar alloys; copper-zinc-nickel].—Giesserei Ztg., May1,1912; p. 271; May15, p. 316; June1, p. 346; July1, p. 410; 8000 w; 80c.

Kobayashi, M.—*Ueber die Legierungen des Tellurs mit Zink;* [Alloys of tellurium and zinc].—Internat. Zts. f. Metalogr., Jan., 1912; p. 1-69*; 95c.

Lelong, A., and E. Mairy.—*Traité Pratique de Fonderie;* [Manual of Foundry Practice; iron, malleable iron, steel, copper and alloys].—Paris, 1912; 2 volumes; pp. 659, 512; (book).

Price, W. B. and R. K. Meade.—*The Technical Analysis of Brass and the Non-Ferrous Alloys.*—London, 1911; pp. —; $2.75 (book).

Schleicher, A. P.—*Experimentelle Untersuchungen am System Cd-Sn;* [Experimental researches on the combinations of tin and cadmium].—Internat. Zts. f. Metallogr., Jan.,1912; p. 76-89*; 95c.

Wachenfeld, H.—*Die Metall- und Eisengiesserei mit besonderer Berücksichtigung der Legierungen und Gattierungen für den Maschinenbau;* [The iron and metal foundry, with special reference to the alloys and mixtures for metal machinery].—Halle,1911; 112 pp; 15 figs.; $1.75 (book).

Weidig, M.—*Metallurgische und Technologische Studien auf dem Gebiete der Legierungs-Industrie;* [Metallurgic and technologic studies in industrial alloys].—Berlin, 1911; pp. —; $2 (book).

———. *Magnetic Properties of Alloys;* [Discussion before Faraday Soc.].—Electr. Rev., May24, p. 860; 3500 w; 35c. Also in Electrician, May31,1912; p. 319; 5000 w; 35c. Adso in El. Rev. (Chicago), June8, 1912; p. 1120; 2400 w; 25c.

PYROPHORIC ALLOYS

See under Cerium.

Aluminum

For alums see under "Salines and Alkalis" (Non-Metals).

For Aluminium Alloys see under "Alloys (non-Ferrous.")

Ashley, G. H.—*Bauxite Mining in the State of Tennessee;* [From "Resources of Tennessee"].—Mng. Sci., Jan.4,1912, p. 8; 1800 w*; 20c. Also in Mines & Minerals, Feb.,1912, p. 419; 2500 w*; 35c. Also in Mining & Engg. World, March9, p. 557; 1600 w*; 10c.

Bairsto, G. E.—*Some Properties of Aluminum-Anode Films.*—Faraday Soc., Trans., Nov.,1911, p. 1-30*; $4.00.

Barth, O.—*Additions to Improve Alloys;* [in German].—See under Alloys.

Baumann, R.—*Versuche mit Aluminium geschweisst und ungeschweisst, bei gewöhnlicher und höherer Temperatur;* [Researches with aluminum at ordinary and at high temperatures].—Ver. Deu. Ingr., Zts., Dec. 2,1911, p. 2016; 2000 w; 50c.

Borchers and Schirrmeicher, —. *Verbesserung der Eigenschaften des Aluminiums;* [Improvement of aluminum by addition of cobalt; German Pat. No. 242,317].—SW. Deu. Industrie Ztg., Feb.20,1912, p. 93; 500 w; 35c.

Brislee, F. J.—*The Physical Constants of Aluminum;* [Density and co-efficient of expansion].—El. Rev. (London), Jan.5.1912, p. 37; 500 w; 35c.

Cazes, E.—*L'état actuel de l'industrie des aluns et du sulfate d'alumine;* [Present status of the alum and aluminum sulfate industries; from Rev. de Chimie Appliquée]. —Jnl. du Four Electriq., Feb.1,1912; p. 56; 3000 w; 35c.

Chapman, A. C.—*An Investigation of Aluminum with Special Reference to its Suitability for the Construction of Brewery Plant.*—Inst. of Brewing Jnl., Vol. 17, 1911, pp. 660-691.

Courtagne, G.—*Notes bibliographiques sur l'azoture d'aluminium;* [Historical development and bibliography of the aluminum nitride industry].—Phosphate, Jan.8, 1912; p. 39-41; Jan.22, p. 83-84; Jan.29, p. 103; 5500 w; 65c.

Dusaugey, E.—*Les conducteurs d'électricité en aluminium;* [Aluminum electrical conductors].—Paris, 1912; 140 pp; 60 figs; $2.50 (book).

Dux.—*Die Aluminium Industrie A. G. Neuhausen und ihre Konkurrenz-Gesellschaften;* [The Neuhausen Aluminum Industry Co. and its affiliated concerns].—March1,1912; p. 174; 3000 w*; 45c.

Flusin, G.—*L'industrie de l'aluminium;* [Methods of aluminum production in France].—Houille Blanche, Oct.-Nov.,1911; pp. —; 50c.

German abstract in Zts. f. Elektrochemie, Luzerne, Switzerland; 1912; pp. —; $1 (pamphlet).

Foote, H. W. and S. R. Scholes.—*The Extraction of Potash and Alumina from Feldspar.*—Jnl. of Ind'l & Engg. Chem'y, May,1912; p. 377; 1200 w; 65c.

Grossmann, H.—*Zur Geschichte der französischen Aluminiumindustrie;* [Historical development of the aluminum industry in France].—Zts. f. Elektrochemie, March1, 1912; p. 162; 1000 w; 45c.

Guillet, L.—*Praktische Erfahrungen bei der Aluminiumerzeugung im elektrischen Ofen;* [Practical experiences with electrometallurgy of aluminum; German abstract from paper in Soc. d. Ingrs. Civ. France, Bull. No. 10, 1911].—Elektrotechnik & Maschinenbau, Jan.28,1912; p. 85; 500 w; 35c.

Spanish abstract in Rev. Minera, March 24,1912; p. 143; 3500 w; 35c.

Abstract on manufacture of aluminum paper and aluminum powder. In French in Rev. de Mét'gie, March; pp. 147-159*; $1.15. Also in Jnl. du Four Electriq. Apr 1, p. 151; Apr.15, p. 175; 3000 w*; 50c. In Italian in Rassegna Mineraria, Jan.21, 1912; p. 49; 2800 w; 35c.

Herz, W.—*Die Löslichkeit von Aluminium-hydroxyd in Natronlauge;* [The solubility of aluminum hydroxide in sodium solutions].—Zts. f. Elektrochemie, Jan.1,1912, p. 1; 1000 w; 40c.

Jacob, A.—*Aluminum Conductors.*—Electrician, June7,1912; p. 370; 400 w; 35c.

Larsen, E. S.—*Alunite in the San Cristobal quadrangle, Colo.*—U. S. Geol. Survey, Bull. 530-F; 1912; 7 pp.*; 20c.

Masselon, E.—*Fonderie de bronze d' aluminium;* [Preparation of aluminum bronze in the foundry].—Métallurgie, Jan. 17,1912; p. 35; 750 w; 35c.

Pannell, E. V.—*The Characteristics of Copper vs. Aluminum Overhead-Line Conductors.*—El. Rev. (London), May10,1912; p. 771; May17, p. 815; 5000 w; 50c. Abstract in Canadian Engr., July18, p. 181; 4000 w*; 25c.

Phalen, W. C.—*Bauxite and Aluminum;* [Production in U. S., 1911].—U. S. Geol. Surv., Mineral Resources f. 1911; 1912; 19 pp.; 20c. Abstract in Mining & Engg. World, May11,1912; p. 997; 3000 w; 10c.

Pitaval, R.—*L'entente des fabricants d'aluminium;* [The international aluminum syndicate agreement].—Echo d. Mines, May 30,1912; p. 635; 1000 w; 35c.

Pitaval, R.—*Les exportations françaises de produits électrométallurgiques;* [French exports of electrometallurgic products].—Jnl. du Four Electriq., Feb.15,1912; p. 73; 1000 w; 35c.

Pitaval, R.—*Revue des industries électrochimiques et électro-métallurgiques;* [Progress in electrochemistry and electrometallurgical industries, 1911].—Jnl. du Four Electriq., Jan.1,1912, p. 1; 2000 w; 35c.

Reprint in Soc. Amicale Mineurs de Douai, Bull., March10,1912; p. 154-160; March25, p. 168—; 50c.

Schaller, W. T.—*The Alunite-Beudantite Group;* [Mineralogic studies].—U. S. Geol. Surv., Bull. 509; 1912; pp. 70-76; 10c.

Rosenhain, W., and Archbutt, S. L.—*Aluminum-Zinc-Copper Alloys.* (See Alloys.)

Watts, O. P.—*Electroplating on Aluminum.*—Wisconsin Engr., Jan.,1912, p. 162; 1600 w; 35c.

Zink, R. J.—*Ueber die Entstehung und Verhüttung von Aluminiumstaubexplosionen;* [Origin and prevention of aluminum-dust explosions].—Chemiker Ztg., Dec.12, 1911, p. 1370; 2400 w; 35c.

Associazone fra gli Industriali Metallurgici Italiani.—*The Metallurgic Industry in Italy; Description of Some of the Principal Works.*—Milan, 1911; 430 pp.*; $2.00.

I. K.—*Aluminium Legierungen;* [Use of aluminum in various commercial alloys].—S. W. Deu. Industrie Ztg., Jan.23,1912; p. 35; 1200 w; 35c.

———. *Aluminum Ore and its Accessibility in California;* [Discusses alleged "aluminum silicate ore" in southern California].—Los Angeles Mng. Rev., March30, 1912; p. 5; Apr.6, p. 5; Apr. 13, p. —; 6000 w; 40c.

———. *Commercial Availability of Alunite;* [Methods of treatment for potash, alum, and bauxite].—E. & M. J., March16, 1912, p. 564; 1000 w; 25c.

———. *Färben von Aluminiumgegenständen;* [Protective painting of aluminum wares].—Sw. Deu. Industrie Ztg., March5, 1912; p. 118; 1000 w; 35c.

———. *Schwierigkeiten beim Giessen von Aluminium;* [Difficulties in aluminum casting; from "The Foundry"].—Eisen Ztg., March23,1912; p. 207; 1000 w; 35c.

Antimony

See Alloys, for references to bearing, babbitt, type and similar antimonial metals.

Beyschlag, Krusch and Vogt.—*Monograph of Ore Deposits;* [In German].—See under Gold.

Cohen, Ernst.—*The Allotropy of Metals;* [Tin and Explosive Antimony].—Faraday Soc., Trans., Nov.,1911, pp. 122-135*; $4.00.

Flegel.—*Mining in Servia.*—See Copper.

Fink, C. G.—*Vacuum Furnace Metallurgy;* [Tests on production of antimony from stibnite; read to Amer. Electrochem. Soc., April, 1912; abstract].—Met. & Chem. Engg., May,1912; p. 296; 1000 w; 35c.

Hess, F. L.—*The Production of Antimony, Arsenic, Bismuth and Selenium in* 1910.—U. S. Geol. Survey, Mineral Resources f. 1910; 1911; 10 pp.; 10c.

Jaeger, F. M.—*Beiträge zur Kenntnis der natürlichen Sulfo-Antimonite, I and II;* [The natural sulfo-antimonites; read to Kkl. Akad. Wetenschappen Amsterdam, Nov.25,1911; brief abstract in] Chemiker Ztg., Feb.6,1912; p. 148; 150 w; 30c.

Parravano and de Cesaris.—*Arsenic-Antimony Alloys.*—See under Alloys.

Pickings, H. B.—*Metalliferous Mines.*—N. Scotia Dept. of Mines, Rep. f. 1911; 1912; pp. 187-231*; $1.

Rangel, M.—*Mineral Resources of Durango.*—See under Mexico (Durango).

Read, T.—*Mining in China.*—See China.

Tarugi, N.—*Sulla ricerca dell'antimonia;* [Notes on the test for antimony].—Soc. Chim. Ital., R-C; Vol. III, No. 11, p. 319. Abstract in Rassegna Mineraria, Dec.11, 1911, p. 279; 500 w; 35c.

———. *Antimony in* 1911.—E. & M. J., Jan.6,1912, p. 6; 750 w; 25c.

———. *A New Process for Refining Antimonial-Lead and Other Lead Alloys;* [L. E. Wemple process].—Brass World, Nov.,1911, p. 395; 600 w*; 20c. Also in Mining & Engg. World, Feb.10, p. 356; 600 w*; 10c.

———. *Métallurgie de l'antimoine en France;* [Metallurgy of Antimony in France].—Soc. Amicale d. . . Mineurs de Douai, Bull., Jan.25,1912, p. 47; 750 w; 35c.

———. *Production d'Algérie,* 1911.—Echo d. Mines, March11,1912; p. 306; 35c.

———. *Ueber den Erzbergbau in der chinesischen Provinz Hunan;* [Mining industry in Yunnan, China; from German consular report].—Erzbergbau, March15, 1912; p. 86; 1500 w; 35c.

Bismuth

Dwyer, W. J.—*Bismuth in* 1911; [Reviews production in U. S.].—E. & M. J., Jan. 6,1912, p. 39; 500 w; 25c.

Frenzel.—*Rare Metal Industry, Colorado.*—See under Colorado.

Hess, F. L.—*The Production of Antimony, Arsenic, Bismuth and Selenium in* 1910.—U. S. Geol. Survey, Mineral Resources f. 1910; 1911; 10 pp.; 10c.

MacDonald, A. R.—*Queensland,* 1911.—See under Australia (Queensland).

McLaren, Alex.—*Gold and Rare Metal Mining near Llano, Texas;* [Gold-platinum-bismuth].—Mng. Sci., May2,1912; p. 394; 300 w*; 20c. Also in Salt Lake Mng. Rev., May15, p. 11; 2000 w*; 25c.

Pearce, W. C. W.—*The "Glen" Bismuth Mines, North Queensland;* [Bismuth-tungsten mining and treatment, Heberton district].—Instn. of Mng. & Met'l'gy, Bull. 87, Dec.,1911, pp. 1-5*; 1600 w; 50c. Abstract in Mining & Engg. World, Nov.4,1911, p. 918; Jan.13, p. 71; 2500 w*; 20c.

Zumbusch, E.—*Ueber Wismut;* [Notes on bismuth].—München Techn. Hochschule dissert., 1911; 94 pp.; $1 (Thesis).

———. *Production of Bismuth in* 1911.—Mining & Engg. World, Jan.27,1912; p. 176; 1000 w; 10c.

Cadmium

Frenzel.—*Rare Metal Industry, Colorado.*—See under Colorado.

Gürtler.—*Tin-Cadmium Alloys.*—See Alloys.

Kohlschütter, V. and C. Ehlers.—*Versuche über Kondensation von Metalldämpfen;* [Tests on the condensation of metallic sublimates and vapors; arsenic, cadmium, zinc].—Zts. f. Elektrochemie, May15,1912; p. 373; 4000 w*; 45c.

Schleicher. — *Tin-Cadmium Alloys.* — See Alloys.

———. *One of the New Uses for Cadmium;* [Alloy in tungsten electric filaments].—Brass World, Nov.,1911, p. 382; 300 w; 25c. Also in Mining & Engg. World, Feb. 3,1912, p. 289; 300 w; 10c.

———. *Production of Cadmium During* 1911.—Mining & Engg. World, Jan.27,1912; p. 183; 500 w; 10c.

Calcium

Anderson, J. H.—*Darstellung von Calcium und Calciumlegierungen;* [Preparation of calcium and calcium alloys].—Darmstadt Techn. Hochschule Dissert; 1911; pp. —; $1 (Thesis).

Canadium

See Platinum.

Cerium

See also "Thorium and Rare Earths."

Barth, O.—*Additions to Improve Alloys;* [in German].—See under Alloys.

Hirsch, A.—*The Preparation and Properties of Metallic Cerium.*—Amer. Electrochem. Soc., Trans.; Sept.,1911, 45 pp*; 50c.

Abstract in Met. & Chem. Engg., Oct., 1911, p. 540; 3800 w*; 35c. Also in Jnl. of Ind'l Chem'y, Dec., p. 880; 18,000 w*; 65c. Also in Chem. Engr., Dec., p. 513; 1500 w; 35c. Also in Mng. Sci., Feb.1, 1912, p. 130; 1200 w*; 20c.

Kellermann, H.—*Die Ceritmetalle und ihre Pyrophoren Legierungen;* [Metallic cerium and its pyrophoric alloys].—Halle, Germany, 1912; pp. —; $2 (book).

———. *Pyrophoric (Cerium) Alloys.*—Mining & Engg. World, Feb.3,1912; p. 294; 250 w; 10c.

Chromium

See also "Paints and Pigments" under Non-Metals.

For chrome steels, see Ferro-Alloys under "Iron and Steels."

Binda, J. L.—*Mines and Minerals of Macedonia;* [Chiefly pyrite and chromite; from U. S. consular report].—M. & S. P., Apr.13,1912; p. 535; 1200 w*; 20c.

Cirkel, Fr.—*Chrom-Eisenerz;* [Chrome-iron ores, their nature and occurrences; abstract from report of Canadian Dept. Mines].—Erzbergbau, Jan.15,1912; p. 18; 1500 w; 35c.

Dominian, L.—*Mining in Turkey in* 1911.—M. & S. P., Jan.6,1912, p. 58; 2500 w*; 35c.

Goodale.—*Newfoundland.*—See Newfoundland.

Hall, A. L.—*Transvaal Rich Chromite Deposits;* [Moolhoek, Sekukuniland].—Mining & Engg. World, March2,1912; p. 516; 600 w; 10c.

Rhodesia Chamber of Mines.—*Tables of Monthly Output.*—See under Rhodesia.

Swinburne, U.—*Natal,* 1911.—See Natal.

———. *L'année commerciale* 1911; [Review of mining and metallurgy in New Caledonia in 1911].—Bull. du Commerce N. Calédonie, Apr.6,1912; p. 1-4; 35c. Abstract in Echo d. Mines, June3,1912; p. 642; 1000 w; 35c.

———. *La situation minière de la Nouvelle Calédonie;* [Mining in New Caledonia in 1910; abstract from report of French minister of colonies].—Echo d. Mines, Oct. 12,1911, p. 1015; 2000 w; 35c. Reprint in Jnl. du Four Electriq., Oct.15, p. 988; 2000 w; 35c. Also in Soc. Amicale d. . . Mineurs de Douai, Bull., Nov.25,1911; pp. 754-761; 35c.

———. *Smelting Chromiferous Iron Ore* [in Greece and Cuba].—E. & M. J., March 16,. 547; 500 w; 25c.

Cobalt

For nickel-cobalt and cobalt steels see "Ferro-Alloys" and "Special Irons and Steels" in Chapter 4.

Barth, O.—*Additions to Improve Alloys;* [in German].—See under Alloys.

Barth, O.—*Verarbeitung einer geröstetten bleireichen Kobalt-Nickelspeise;* [Treatment of a roasted cobalt-nickel speiss rich in lead].—Metallurgie, March22,1912; p. 199-216*; 50c.

English abstract in Soc. of Chem'l Ind'y, Jnl., May,1912; 500 w; 65c. Reprinted in E. & M. J., June1, p. 1096; 25c.

Boecker, G.—*Untersuchungen über das System Kobalt-Kohlenstoff;* [Tests of cobalt-carbon alloys].—Metallurgie, May8, 1912; pp. 296-303*; 50c.

Fink, C. G.—*Vacuum Furnace Metallurgy;* [Tests on some complex smaltite ores of Canada; read to Amer. Electrochem'l. Soc., April,1912; absfract].—Met. & Cheml. Engg., May,1912; p. 296; 1000 w; 35c.

Gibson, T. W.—*Ontario,* 1911.—See Ontario.

Hess, F. L.—See under "Miscellaneous."

Schildbach, R.—*Ueber die elektrochemische Verhalten des Kobalts;* [The electrochemical behavior of cobalt].—Dresden Techn. Hochschule, 1911 dissert; pp. —; (thesis).

Copper

U. S. AND ALASKA

Adamson.—*Nevada,* 1911.—See Nevada.

Aikens, W.—*The Hancock Con. Mine, Mich., and its Equipment.*—Mining & Engg. World, Apr.13,1912; p. 805; 1800 w*; 10c.

Bamberger, C. G.—*Caving System at Ohio Copper Mine;* [Bingham, Utah].—E. & M. J., Apr.6,1912; p. 701; 1800 w*; 25c.

Bell, R. N.—*13th Annual Idaho Report.*—See under Idaho.

Bond, J.—*Sale of the R. R. R. Mine near Patagonia, Ariz.*—E. & M. J., Apr.27,1912; p. 830; 500 w; 25c.

Brooks.—*Alaska,* 1911.—See under Alaska.

Butler and Dunlop.—*Metal Production in the Central States,* 1911.—See under Lead.

Carpenter, A. H.—*Boyer Copper Deposits, Nevada.*—M. & S. P., Dec.23,1911, p. 804; 3000 w*; 20c.

Clifford, Jas. O.—*Mining Copper Ore at Chino, N. Mex.*—M. & S. P., March30,1912; p. 463; 1000 w*; 20c.

Cole, D.—*The Ray Consol. Copper Co. System of Mining.*—Colo. School of Mines Mag., Feb.,1912, p. 98; 2700 w; 35c.

Collins.—*Colorado,* 1911.—See Colorado.

Copenharve, Chas.—*Copper Precipitation at Butte, Mont., a Paying Industry;* [From mine waters].—Mining & Engg. World, March30,1912; p. 720; 1200 w; 10c.

Copenharve, Chas.—*Review of Mining in the U. S. in* 1911; *Montana.*—Mining & Engg. World, Jan.27,1912; p. 222; 6500 w; 25c.

Douglas, Jas.—*Copper in Arizona in* 1911. —E. & M. J., Jan.6,1912, p. 12; 1000 w; 25c.

[Douglas, Jas.]—*The Copper Queen;* [Notes on Douglas' lecture before British Instn. of Mng. & Met'l'gy].—Mng. Mag., Dec.,1911, p. 415; 1000 w; 35c.

Edwards, G. E.—*The Quincy Mine, Mich., from Stope to Smelter.*—Mining & Engg. World, Apr.20,1912; p. 853; Apr.27, p. 897; 4800 w*; 30c.

Fichtel, C. L. C.—*The Lake Superior District in* 1911.—E. & M. J., Jan.6,1912, p. 11; 1800 w; 25c.

Fisher, F. L.—*Montana,* 1911.—See Montana.

Fränkel, H.—*Der Kupferbergbau in den Vereinigten Staaten;* [The copper mining industry in the U. S.].—Tübingen, 1911; pp. ———; (book).

Goodrich, H. C.—*Steam Shovels and Ore Shipment at Bingham, Utah;* [Read to Utah Soc. of Engrs.; abstract].—Salt Lake Mng. Rev., Oct.30,1911, p. 18; 1800 w; 25c. Also in M. & S. P., Nov.11, p. 624; 1800 w*; 20c. Also in Mining & Engg. World, Dec.2, p. 1114; 2000 w*; 10c. Also in Los Angeles Mng. Rev., Jan.6,1912, p. 6; 1800 w*; 20c.

Gottsberger, B. B.—*Operations of the Miami Copper Co. in* 1911; [From annual report of general manager].—Mining & Engg. World, May11,1912; p. 1001; 1000 w; 10c. Also in M. & S. P., May25, p. 718; 1000 w*; 20c.

Hall, F.—*Colorado,* 1911.—See under Colorado.

Heikes, etc.—*Metal Production in Western and Alaskan Mines,* 1910.—See under U. S.

Henahen.—*Colorado,* 1911.—See Colorado.

Hore, R. E.—*The Copper Mining Industry of Michigan;* [Abstract of monograph of Michigan Geol. Survey].—Mining & Engg. World, March16,1912; p. 601; March 23, p. 656; March30, p. 707; Apr.6, p. 763; 16,000 w*; 50c.

Hosking, J.—*The Tomahawk Lode;* [History of discovery of Calumet & Hecla mine].—E. & M. J., Apr.20,1912; p. 777; 500 w; 25c.

Ingalls, W. R.—*Some Observations in Butte, Mont.;* [On ore bodies].—E. & M. J., March16,1912, p. 549; 2100 w; 25c.

Ingalls, W. R.—*The Miami District, Ariz.:* [Review of mines, milling methods and ore bodies].—E. & M. J., Jan.13,1912, p. 119; 3000 w*; 25c.

Abstract in Mines & Methods, Jan.,1912, p. 385; 3000 w*; 35c.

Jackling, D. C.—*Work of the Utah Cop-*

per Co.; [From report for 1911].—M. & S. P., May11,1912; p. 663; 4000 w*; 20c.

Jackling, D. C.—*Chino Copper Co.; Review of* 1911 *Operations.*—Mining & Engg. World, Apr.27,1912; p. 902; 750 w; 10c. Also in M. & S. P., May25, p. 725; 2400 w*; 20c.

Jackling, D. C.—*Ray Cons. Copper Co.; Results of Year's Work,* 1911; [From 1st annual report].—Mining & Engg. World, May4, 1912; p. 958; 800 w; 10c. Also discussed in M. & S. P., May18, p. 692; 3000 w*; 20c.

Jamison.—*Wyoming,* 1911.—See Wyoming.

Lauck, W. J.—*The Metal Miners of the Butte District, Mont.*—Mining & Engg. World, Feb.3,1912; p. 299; 2300 w; 10c.

Lauck, W. J.—*Labor Conditions in Arizona Smelters.*—M. & S. P., Feb.3,1912; p. 212; 750 w; 20c.

Mace, C. H.—*Genesis of Leona Heights Ore Deposit, Cal.;* [Cupriferous pyrite near Oakland].—Mining & Engg. World, Dec.30, 1911, p. 1320; 1500 w; 10c.

Martin, Al. H.—*Mason Valley Mines and Smelting Works, Nevada.*—Mines & Methods, April,1912; p. 447; 1700 w*; 25c.

Martin, A. H.—*Review of Mining in the U. S. in* 1911; *California.*—Mining & Engg. World, Jan.27,1912; p. 203; 8000 w; 10c.

Maurer, R. H.—*Review of Lake Superior Copper Mining in* 1911.—M. & S. P., Jan.6, 1912, p. 92; Jan.13, p. 106; 4000 w; 45c.

Meuche, A. H.—*Some Practical Suggestions for Diamond-Drill Explorations;* [With special reference to Superior copper region].—Lake Superior Mng. Inst., Proc., 1911; pp. 77-81.*

Abstract in Mng. Scl., Sept. 7, 1911, p. 220; 1500 w*; 20c. Also in M. & S. P., Sept.16, p. 357; 700 w*; 20c. Also in Mines & Methods, Sept., p. 317; 1000 w*; 20c. Also in Mining & Engg. World, March 30, p. 706; 1500 w*; 10c.

Parks, H. M.—*Resources of Oregon.*—See under Oregon.

Paterson, Alex.—*Copper Mining in America at Great Depths;* [Describes mining practice at Calumet & Hecla mine; read to Scot. Fed. Inst. of Mng. Students, Western branch].—Iron & Coal Trades Rev., March 29,1912; p. 486; 3500 w*; 35c.

Perkins, E.—*Arizona,* 1911.—See Arizona.

Perkins, W. J.—*A Lake Superior Copper Mine Plant; Surface Equipment of the Hancock Cons. Mng. Co.*—Mine & Quarry, March,1912; p. 589-594*; 25c. Abstract in M. & S. P., March30,1912; p. 469; 1200 w*; 20c.

Pratt, J. H. and H. M. Berry.—*The Mining Industry in North Carolina,* 1908-1910.—N. Car. Geol. Survey, Economic Paper No. 23; 1911; 134 pp*; $1.

Probert, F. H. and R. B. Earling.—*Estimation of Ore Reserves;* [Practice at Ray Central mines, Ariz.].—E. & M. J., Dec.16, 1911, p. 1179; 1800 w*; 25c. Abstract in Mines & Methods, Jan.,1912, p. 389; 1800 w*; 25c.

Ransome, F. L.—*The Turquoise Copper-Mining District, Arizona.*—U. S. Geol. Surv., Bull. 530-C; 1912; 12 pp*; 10c.

Abstract in Mining & Engg. World, June 29, p. 1359; 2400 w*; 10c.

Reagan, A.—*Ft. Apache District.*—See Arizona.

Rice, C. T.—*Labor Conditions at the Calumet & Hecla, Mich.*—E. & M. J., Dec.23, 1911, p. 1235; 4000 w*; 25c.

Rice, C. T.—*Baltic Method of Mining.*—E. & M. J., Apr.27,1912; p. 843; May4, p. 897; May11, p. 947; 15,000 w*; 65c.

Rogers, A. F.—*Occurrence and Origin of Gypsum and Anhydrite at the Ludwig Mine, Lyon County, Nevada;* [Copper mine].—Econ. Geol'y, Feb.-March,1912; pp. 185-189; 65c.

Schrader, F. C.—*A Reconnaissance of the Jarbidge, Contact and Elk Mountain Mining Districts, Elko County, Nev.*—U. S. Geol. Survey, Bull. 497; 162 pp*; 10c.

Abstract on Contact district in Mining & Engg. World, May4,1912; p. 955; 2100 w*; 10. Also in Mng. Sci., July4, p. 559; 1500 w; 20c.

Scott, W. A.—*Utah,* 1911.—See Utah.

Sheldon, G. L.—*Mining and Milling at the Nevada Consolidated.*—Mex. Mng. Jnl., May,1912; p. 19; 1800 w*; 25c.

Siebenthal, C. E.—*The Copper Lead and Zinc Industries of the Southern States.*—Manfrrs. Record, Feb.22,1912; p. 61; 4500 w; 65c.

Sizer, F. L.—*The Mascot Copper Co. Ore Bodies;* [Dos Cabezos, Cochise county, Ariz.].—M. & S. P., Apr.13,1912; p. 537; 1000 w*; 20c.

Steele, H.—*Cost of Mining a Ton of Ore;* [at large low-cost copper, gold and diamond mines].—E. & M. J., May25,1912; p. 1023; 1600 w; 25c.

Steele, H.—*Utah Copper Costs in "Lake Superior Figures."*—E. & M. J., May11, 1912; p. 925; p. 921; 2500 w; 25c. Abstract in Mines & Methods, May,1912; p. 472; 2000 w; 20c.

Stevens, H. J.—*Review of Mining in the U. S. in* 1911; *Lake Superior Copper.*—Mining & Engg. World, Jan.27,1912; p. 215; 3500 w; 10c.

Stewart, C. A.—*Geology and Ore Deposits of the Silverbell Mining District, Ariz.*—Amer. Inst. Mng. Engrs., Trans.; Feb.,1912; 51 pp.*; $1.15. Abstract in Mining & Engg. World, May25, p. 1104; June1, p. 1147; 7000 w*; 20c.

Stoneham, W. J.—*Nevada,* 1911. See Nevada.

Thayer, B. B.—*The Mines of Butte in* 1911.—E. & M. J., Jan.6,1912, p. 10; 500 w; 25c.

Tolman, C. F., Jr.—*Arizona;* [Brief copper review; 1911].—M. & S. P., Jan.6,1912, p. 82; 1500 w; 35c.

Umpleby, Jos. B.—*Geology and Ore Deposits of the Myers' Creek and Oroville-Nighthawk Mining Districts.*—Washington (State) Geol. Surv., Bull. 5, 1911; 111 pp*; 50c.

Walsh, Wm.—*Montana Ranks High as a Metal Producer;* [Annual report for 1911].—Mining & Engg. World, Dec.16,1911, p. 1217; 2200 w; 10c.

Walter, P.—*New Mexico,* 1911.—See N. Mex.

Weed, W. H.—*Brief Notes on the Geology of the Ely District, Nevada.*—Mining & Engg. World, June8,1912; p. 1198; 750 w; 10c.

Weed, W. H.—*Notes on the Miami Copper District, Arizona;* [Ore deposits and geology].—Mining & Engg. World, May18, 1912; p. 1043; 2200 w; 10c.

Whyte, F. W. C.—*Annual Address, President of the Montana Society of Engineers;* [Includes progress in copper mining and smelting].—Asso. of Engg. Soc's; Jnl.; May,1912; p. 266-273; 40c.

Yeatman, P.—*Work of the Nevada Cons. Copper Co.;* [Report for 1911].—M. & S. P., May4,1912; p. 627; 2200 w; 20c.

Zalinski, E.—*Utah,* 1911.—See Utah.

Zehring, W.—*Utah,* 1911.—See Utah.

———. *Alaska Copper Mines;* [Discusses history and profitability].—M. & S. P., March16,1912, p. 396; 800 w; 20c.

———. *Amalgamated Shows Great Improvement in Earnings;* [Report for year ended Apr.30,1912; abstract].—Mining & Engg. World, June15,1912; p. 1238; 1000 w; 10c.

———. *Anaconda Copper Mining Co.;* [Annual report for 1911; summary].—E. & M. J., May18,1912; p. 977; 1000 w; 25c.

———. *California in* 1911.—Mng. Jnl., Jan.6,1912; p. 13; 2500 w; 35c.

———. *Calumet & Hecla Operations During* 1911; [Abstract of annual report].—Mining & Engg. World, June1,1912; p. 1152; 750 w; 10c.

———. *Costs of Ore Extraction at Detroit Copper Co., Arizona.*—E. & M. J., Apr.13,1912; p. 741; 300 w; 25c.

———. *Costs at Tamarack, Anaconda, Copper Range and Calumet & Arizona.*—E. & M. J., June8,1912; p. 1131; 2000 w; 25c.

———. *Idaho,* 1911.—Mining & Engg. World, Jan.27,1912; p. 213; 1500 w; 10c.

———. *Mining in Nevada in* 1911.—E. & M. J., Jan.6,1912; p. 67; 3000 w; 25c.

———. *Montana in* 1911; [Copper review].—Mng. Jnl., Jan.6,1912, p. 19; 4000 w; 35c.

———. *Old Dominion Mining & Smelting Co. Report.*—Mining & Engg. World, Apr.13,1912; p. 823; 1800 w; 10c.

———. *The Chino Copper Co.;* [Ores, geology, mining and treatment].—Mines & Minerals, June,1912; p. 668; 2500 w*; 35c.

———. *The Savanna Copper Co.;* [New Mexico].—El Paso Mng. Jnl., May,1912; p. 14; 1200 w; 35c.

———. *Yerington District, Nevada.*—E. & M. J., Apr.27,1912; p. 828; June8, p. 1135; 2100 w; 40c.

CANADA

Brewer, W. M.—*Marble Bay and Britannia Copper Mines, B. C.;* [Read to Canadian Mng. Inst., Western branch].—Canadian Mng. Jnl., March15,1912, p. 196; 1000 w; 25c.

Denis.—*Review, Quebec,* 1911.—See Quebec.

Goodale, S. L.—*A Miner's Summer Trip to Newfoundland.*—Colo. School of Mines Mag., Feb.,1912, p. 96; 1500 w; 35c.

Gray, Alex.—*Ontario Nickel Industry in* 1911; [Also copper].—Mng. Jnl., Jan.27, 1912; p. 85; 1500 w; 35c.

Hedley, R. R.—*Work of the Cons. Mining & Smelting Co. of Canada, Ltd.;* [Silver-lead-zinc and copper mining and smelting at Trail, B. C., and outlook for iron; read to Canadian Mng. Inst., Toronto, March, 1912; abstract].—Canadian Mng. Jnl., Apr. 1,1912; p. 222; 1800 w; 25c. Also in E. & M. J., June1,1912; p. 1096; 1100 w; 25c.

Hedley, R. R.—*British Columbia in* 1911. —See under Br. Columbia.

Jacobs, E.—*Review of Mining and Production in British Columbia in* 1911.—Canadian Mng. Jnl., Jan.1,1912; p. 7; 1500 w; 25c. Also in M. & S. P., Jan.6,1912, p. 68; 3000 w; 35c. Also in E. & M. J., Jan.6, p. 75; 2000 w; 35c. Also in Mining & Engg. World, Jan.27, p. 261; 7000 w; 25c.

Robertson, W. F.—*British Columbia,* 1911.—See under Br. Columbia.

———. *Cons. Mng. & Smltg. Co., Trail Smelter Uutput,* 1911.—See under Lead.

———. *Nickel in Canada in* 1911.—M. & S. P., May11,1912; p. 662; 300 w; 20c.

———. *Western Copper Group of Mineral Claims;* [Mines and geology of Swanson Bay district, B. C.].—Brit. Columbia Mng. & Engg. Record, Jan.,1912; p. 184; 2100 w*; 35c.

MEXICO; CENTRAL AMERICA; WEST INDIES

Akin, A. D.—*Mineral Resources of Honduras.*—Mining & Engg. World, Apr.20, 1912; p. 865; 3200 w; 10c.

Alley, F. C.—*Mineral del Carmen* [copper district, Durango].—Mex. Mng. Jnl., March,1912, p. 43; 750 w; 25c.

Brady, A. C.—*Mexico,* 1911.—See under Mexico.

Brady, A. C.—*Review of Mining in Foreign Countries in* 1911; *Mexico* [Sonora, by J. I. Cohn].—Mining & Engg. World, Jan. 27,1912; p. 249-261; 19,000 w; 25c.

Hafer, C.—*The Mines of the Sonora Valley, Sonora, Mex.*—Mining & Engg. World, Apr.27,1912; p. 903; 2200 w*; 10c. Reprint in Los Angeles Mng. Rev.., May4, p. 5; 20c.

Holt, E. B.—*The Noria District, Sonora.* —Mex. Mng. Jnl., Feb.,1912; p. 31; 2500 w*; 25c.

Hynes, D. P.—*Geology of the Mina Mexico Mine;* [Argentiferous copper, Sahuaripa district, Sonora].—Econ. Geol'y, April-May, 1912; p. 280-286*; 65c.

Nicholson, H. H.—*Cuba as a Mining Country;* [General conditions and mines and resources in chiefly iron, copper and manganese; also lead-zinc, gold, oil and bitumens, lime and cement].—Mex. Mng. Jnl., June,1912; p. 21; 5000 w; 25c.

Rangel, M.—*Mineral Resources Durango;* [in Spanish].—See under Mexico (Durango).

Roldán, L. V.—*Estudio geologico y minero de la sierra de El Oro;* [Geology of the ore deposits of the El Oro range, Durango].—Soc. Geol. Mex., Bol.; Vol. 7, No. 2; pp. 125-134; $2.

Sheldon, G.—*Alamos District.*—See Sonnora.

———. *Oaxaca in* 1911.—E. & M. J., Jan.6,1912; p. 79; 1000 w; 25c.

———. *Notes on the Nacozari Region.*—Mex. Mng. Jnl., Jan.,1912, p. 25; 1000 w; 25c.

———. *Review of Mexican Output,* 1911. —Mex. Mng. Jnl., Jan.,1912; p. 15; 2100 w; 35c.

———. *Zur Entwickelung des Erzbergbaues in Mexiko;* [Costs and practice at a copper-gold-silver mine and mill in Durango].—Erzbergbau, Apr.15,1912; p. 142; 1600 w*; 35c.

SOUTH AMERICA

Gonzales, M. C.—*Development at Collahuasi. Chile.*—E. & M. J., Apr.20,1912; p. 794; 350 w; 25c.

Hermitte.—*La Concordia Mine.*—See under Argentina.

Langford, F.—*Smelter Building in Chile;* [Labor and political conditions affecting Braden smelter].—M. & S. P., Apr.27,1912; p. 599; 1000 w*; 20c.

Ossa, I. D.—*El Mineral de "El Teniente";* [The "El Teniente" copper mine and district, Chile].—Soc. Nac. Mineria (Chile), Bol.; Jan.,1912; 4 pp.; $1.15.

Tupper, C. A.—*Argentine Government Aerial Tram;* [Famatina copper district]. —E. & M. J., March23,1912; p. 601; 2500 w*; 25c.

———. *La industria minera en el Cerro de Pasco;* [The Cerro de Pasco mines].— Mex. Mng. Jnl., Jan.,1912, p. 58; 2400 w; 25c.

———. *S. America in* 1911.—E. & M. J., Jan.6,1912; p. 82; 2000 w; 25c.

EUROPE

Collins, J. H.—*Observations on the West of England Mining Region.*—Roy. Geol. Soc. of Cornwall, Trans.; Vol. XIV; 1912; pp. 684*; (book).

Collins, H. F.—*Mining Conditions in the South of Spain;* [Labor, mining practice, regulations, etc., on pyrite mining].—M. & S. P., Jan.6,1912, p. 49; 4000 w; 35c.

Flegel, K.—*Die wirtschaftliche Bedeutung der nutzbaren Lagerstätten des Königreichs Serbien;* [Mineral industry and resources of Servia; chiefly copper and coal; also pyrite, gold, antimony, lead, iron, silver, cement, mill-stones, etc.].— Techn. Blätter, May18,1912; p. 153; 2500 w; 35c.

Laur. F.—*Un bassin cuprifère de* 100 *kilomètres carrés en Europe;* [A copper field 100 kms. square in Europe; Hendek basin, Turkey].—Rev. Pratiq. d. Ind's. Met'l'giq., Jan.,1912, p. 12; 750 w; 35c. Also in Rev. Ind'l du Centre, Feb.17, p. 10; 750 w; 35c.

Odriozola, A.—*Santander District, Spain.* —See under Zinc.

Picard. —. *Ueber den Untern Buntsandstein der Mansfelder Mulde und seine Fossilien;* [The lower Bunt sandstone formation in the Mansfeld basin and its fossils].—Kgl. preuss. Geol. L-A., Jahrb., Vol. 30, Pt. 1, No. 3; pp. 576-622*.

Prévost, V.—*L'industrie minière de Huelva;* [Ore shipments from Huelva, Spain, in 1910].—Echo d. Mines, Dec.7, 1911, p. 1260; 1000 w; 35c.

Associazone fra gli Industriali Metallurgici Italiani.—*The Metallurgic Industry in Italy; Description of Some of the Principal Works.*—Milan, 1911; 430 pp.*; $2.00.

———. *Arghana Copper Mines in Turkey.*—Mining & Engg. World, March23,1912; p. 652; 400 w; 10c.

———. *Copper Discovery in Scotland* [Kirkcudbright].—Mining & Engg. World, Dec.2,1911, p. 1111; 400 w; 10c.

———. *Copper Mines in Turkey;* [Arghana deposits, upper Euphrates].—Levant Trade Rev., Nov.,1911, p. 218; 500 w; 75c.

AFRICA

Ball, S. H.—*Mining in the Belgian Congo, West Africa, for* 1911.—M. & S. P., Jan.20, 1912, p. 133; 5000 w*; 25c.

Calderwood, J. M.—*Messina (Transvaal) Development Progress.*—S. Afr. Mng. Jnl., Apr.6,1912; p. 207; 1000 w; 35c.

Davey, W. H.—*Rhodesian Copper; Shamva and Susanna Gold Mines.*—Afr. World, June8,1912; p. 261; 1500 w; 35c.

Diederich, H. W.—*Copper from the Katanga;* [Discusses first shipments to Belgium].—U. S. Consul. Rep., Jan.24,1912, p. 391; 300 w; 20c.

Du Toit, A. L.—*The Copper-Nickel Deposits of the Insizwa, East Griqualand;* [Abstract from report to Cape Geol. Commission].—S. Afr. Mng. Jnl., March9,1912; p. 19; 2000 w; 35c.

Farrell, J. R.—*Tanganyika Concessions, Ltd.;* [Recent progress].—M. & S. P., Jan. 27,1912; p. 175; 1400 w; 20c.

Ganet, L.—*La question du cuivre au Congo belge;* [The copper question in the Belgian Congo].—Echo d. Mines, Dec.11, 1911, p. 1267; 1000 w; 35c.

Marriott.—*Rhodesia,* 1911.—See Rhodesia.

Marriott.—*Transvaal,* 1911.—See Transvaal.

de Montalvao, A.—*Transportation in the Congo;* [English abstract from Revista Colonial, Lisbon, May,1912].—Mng. Jnl., June8,1912; p. 581; 1000 w; 35c.

Swinburne, U.—*Natal,* 1911.—See Natal.

Trevor, T. G.—*Ancient Mine Workings in the Transvaal.*—See under Transvaal.

Williams, R.—*The Tanganyika Concessions, Ltd. Report* [for 1911].—Afr. World, May25,1912; p. 137; 1500 w; 35c.

Williams, R.—*The Outlook for Tanganyika Copper.*—S. Afr. Mng. Jnl., Jan.6,1912; p. 649; Jan.20, p. 717; 2400 w; 50c.

Asso. de l'Université de Liège.—*Le Katanga;* [The Katanga; review of the country and resources; bibliography of mineral deposits literature].—Antwerp, 1911; 150 pp.; (book).

———. *Katanga Copper;* [Review for 1911].—E. & M. J., Jan.6,1912, p. 14; 500 w; 25c.

———. *New Copper Field, French Congo* [Mindouli mines].—Mining & Engg. World, Dec.9,1911, p. 1164; 600 w; 10c.

———. *Northern Rhodesian Copper.*—S. Afr. Mng. Jnl., Apr.13,1912; p. 252; 1000 w; 35c.

———. *Northern Transvaal Copper;* [Developments at Messina].—S. Afr. Mng. Jnl., March16,1912; p. 50; 1000 w; 35c.

———. *Production d'Algérie,* 1911.— Echo d. Mines, March11,1912; p. 306; 35c.

———. *Southern Rhodesia Copper.*—S. Afr. Mng. Jnl., Apr.6,1912; p. 214; 1000 w; 35c.

———. *The Congo in* 1911.—Mng. Jnl., Jan.6,1912, p. 9; 1000 w; 35c. Reprint in S. Afr. Mng. Jnl., Feb.10,1912, p. 828; 1000 w; 35c.

———. *The Development of Central Africa; A Tour to the Great Copper Belt of Katanga.*—Afr. World Annual, Dec.,1911, pp. 235-251*; $1.50.

———. *The Mineral Deposits of the Congo.*—Afr. World, March30,1912; p. 462; 2000 w; 35c.

———. *The Zambesia Mineral Areas;* [Routes and conditions in Tete copper-gold area; from Mozambique Jnl.].—S. Afr. Mng. Jnl., March30,1912; p. 147; 1200 w; 35c.

ASIA AND RUSSIA

Bain.—*Japan Mineral Production.*—See Japan.

Cauldwell, F. W.—*Copper Mining and Smelting in the Caucasus;* [Caucasus Copper Co., near Batum].—U. S. Consul. Rep., Jan.6,1912, p. 95; 1400 w; 20c. Reprint in M. & S. P., Jan.27,1912, p. 163; 20c. Also in Mng. Sci., Feb.15, p. 172; 20c. Also in Mines & Methods, March, p. 442; 20c. Also in Mining & Engg. World, June29, p. 1362; 1500 w; 10c.

Eddingfield, F. T.—*Platinum, Copper and Cinnabar in the Philippines.*—Mineral Resources of Phil. Tds., 1911; p. 36; 400 w; 65c.

Fleck, A.—*Der Kupferbergbau in Ostasien;*

[Copper mining in China and Japan].—Bergbau, Feb.29,1912; p. 123; March7, p. 133; 6000 w; 50c.

Glasenapp, M.—*Die Pyrite Russlands;* [Pyrite resources of Russia].—Riga Ind. Ztg., July31,1911, p. 214; 2000 w; 35c. Abstract in Zentralbl. f. Kunstdünger-Ind., Jan.7,1912, p. 1; 1200 w; 35c.

Also in French in "Phosphate," July7, p. 590; 400 w; 35c.

Also in English in Mining & Engg. World, Oct.14,1911, p. 745; 1800 w; 10c. Also in Los Angeles Mng. Rev., Nov.11, p. 13; 1800 w; 20c.

Kawamura, T.—*The Osaruzawa Mine;* [Describes this Japanese copper mine and mill, with flow sheet].—M. & S. P., May25, 1912; p. 720; 1500 w*; 20c.

Knox.—*Formosa.*—See under Japan.

Nishio, K.—*The Mining Industry of Japan;* [Historical development of laws and mining practice; tables of annual production 1874-1908].—Amer. Inst. Mng. Engrs., Bull. 61, Jan.,1912, pp. 103-147*; $1.15.

Raymond, R. W.—*The Excursion to Hawaii and Japan;* [Includes notes on various Japanese copper mines and smelters, collieries and steel plants].—Amer. Inst. Mng. Engrs., Bull. 61, Jan.,1912, pp. 1-102*; $1.15.

Read, T.—*Mining in China.*—See China.

Richards, J. W.—*The Japan Excursion of the American Institute of Mining Engineers;* [Shisaka and Nikko copper smelters].—Met. & Cheml. Engg., Jan.,1912, p. 15; 5000 w*; 35c.

———. *An American Copper Plant in the Caucasus;* [Describes Caucasus Copper Co. mines, milling and smelting works].—Mining & Engg. World, May18,1912; p. 1053; 2100 w; 10c.

———. *Russia's Copper Production.*—Mng. Jnl., Apr.20,1912; p. 380; 2000 w; 35c. Also reviewed in M. & S. P., May11, p. 657; 500 w; 20c.

———. *The Nikko Copper Works, Japan.*—M. & S. P., March30,1912; p. 471; 1200 w*; 20c.

———. *The Sumitomo Properties;* [Japan; mining and smelting].—Far Eastern Rev.. March,1912; 5 pp.*; 75c.

AUSTRALASIA

Burns, A. W.—*Charters Towers, Queensl., Mining in* 1911; [Statistics of gold and copper output].—Australian Mng. Standd., Feb. 29,1912; p. 195; 1000 w; 35c.

Clark, D.—*Australian Mining and Metallurgy.*—Melbourne, 1911; 600 pp.*; $6.50 (book).

MacDonald, A. R.—*Queensland Mining,* 1911. See Queensland.

Mance.—*Australasia,* 1911.—See Australia.

Pittman.—*New South Wales,* 1911.—See Tin.

Ward, L. K.—*Mt. Balfour Mining Field;* [Tasmania; tin-tungsten and copper].—Australian Mng. Standd., Apr.25,1912; p. 382; 2000 w; 35c.

———. *Australasian Mining,* 1911.—M. & S. P., Jan.6,1912; p. 56; 2400 w*; 35c.

———. *Northern Territory in* 1911.—See under Australia.

———. *Papuan Mining;* [Gold and copper output, 1911; from territorial report].—Mng. & Engg. Rev., April,1912; p. 289; 500 w; 35c.

———. *South Australia;* [Statistics of production, July to Dec., 1911].—Mng. Jnl., May4,1912; p. 426; 1000 w; 35c.

MILLING; SMELTING; REFINING

See also Chapter 10, "Mill and Milling," for crushing and concentration.

See also "Electrolytic Refining," under Chapter 11; also "Fumes," etc., in "Thermic Metallurgy."

Assaeievf, V. P.—*Production of Copper in the Kyshtim District;* [Smelters and electrolytic works; abstract from "Gornyi Journal"].—Mng. Jnl., May4,1912; p. 438; 1200 w; 35c. Also in M. & S. P., June29, p. 891; 1000 w; 20c.

Austin, W. L.—*Leaching Applied to Copper Ore;* [XIII: Laszczynski electrolytic process].—Mines & Methods, Dec.,1911, p. 368; 5000 w; 25c.

Austin, W. L.—*Leaching Applied to Copper Ore; XIV Leaching Rock Without Mining.*—Mines & Methods, Jan.,1912; p. 381; 4600 w; 35c.

Austin, W. L.—*Leaching Applied to Copper Ore; XV; Electrolysis of Chlorides.*—Mines & Methods, Feb.,1912; p. 403; 5200 w; 20c. Abstract in Mex. Mng. Jnl.; Apr., 1912; p. 36; 4500 w; 25c.

Austin, W. L.—*Leaching Applied to Copper Ore; XVI: Recovery of Silver and Gold Content;* [Cyaniding and other processes].—Mines & Methods, March,1912; p. 433; 5000 w; 20c. Abstract in Mex. Mng. Jnl., June, 1912; p. 36; 4500 w; 25c.

Austin, W. L.—*Leaching Applied to Copper Ore; XVII: Electrolytic Deposition of Copper from Solutions.*—Mines & Methods, April,1912; p. 465; May, p. 474; June, p. 497; 15,000 w; 45c.

Abstract in Mex. Mng. Jnl., July,1912; p. 28; Aug.; 8000 w; 45c.

Avery, C. M.—*The New Granby Slag-Disposal Plant.*—"The Labor Saver," April, 1912; 2¼ pp.* Abstract in E. & M. J., May11, p. 935; 1000 w*; 25c.

Bennett, C. W.—*Tensile Strength of Copper on a Rotating Cathode.*—Amer. Electrocheml. Soc., Trans; 17 pp; 4500 w*; 50c.

Abstract in M. & S. P., Apr.27, p. 590; 1500 w; 20c. Also in Met. & Cheml. Engg., May, p. 298; 1200 w*; 35c.

Bretherton, S. E.—*Problems in Modern Copper Smelting.*—M. & S. P., Feb.10,1912; p. 243; 3800 w*; 20c.

Spanish abstract in Mex. Mng. Jnl., April,1912; p. 55; 2000 w; 25c.

Browne, D. H.—*Recent Improvements and Additions to the Smelting Plant of the Canadian Copper Co.*—Canadian Mng. Inst., Bull. 18, Feb.,1912; p. 33; 2800 w; $1,20. Reprint in Mining & Engg. World, March 16, p. 597; 10c.

Brownlee, A. G.—[*Malm Process for Complex Ores*].—See under Lead.

Bryden, C. L.—*Blast Roasting;* [Reviews various processes, including Dwight-Lloyd].—Board of Trade Jnl. (Scranton), April, 1912; p. 19; 3600 w; 20c.

Cottrell, F. G.—*Mineral Losses in Gases and Fumes.*—Jnl. of Ind'l & Engg. Chem'y, March,1912; p. 182; 3000 w; 65c. Abstract in M. & S. P., March30, p. 467; 2500 w; 20c.

Cottrell, F. G.—*Flue Dust Precipitation by Electrostatic Means;* [at Balaklala copper smelter, Cal.].—Amer. Inst. Mng. Engrs., Trans.; read Feb.1912; pp. —*; $1.15.

Abstract in Met. & Cheml. Engg., March, p. 172; 1600 w*; 35c.

Davidson, R. N.—*Electrical Equipment of a Nevada Smelter;* [Mason Valley Mines

Co. plant at Thompson].—Jnl. of El'y Power & Gas, Apr.20,1912; p. 349; 1000 w*; 35c.

Dinsmore, C. A.—*The New Calumet & Arizona Smelter.*—El Paso Mng. Jnl., Feb., 1912; p. 18; 1400 w; 35c.

Dinsmore, Chas. A.—*Arizona Copper Co.'s New Smeltery.*—El Paso Mng. Jnl., Jan., 1911 [1912]; p. 17; 1300 w; 35c.

Dinsmore, Chas. A.—*The Needles Smelter;* [U. S. Smeltg., Refg. & Mng. Co. lead-copper plant at Needles, Cal.].—El Paso Mng. Jnl., Dec.,1911, p. 12; 1300 w*; 35c. Also in Mining & Engg. World, Dec.30, p. 1324; 1000 w*; 10c.

Durham, E. B.—*Electrolytic Refining at the U. S. Mint, San Francisco, Cal.;* [Silver, gold, platiniferous copper].—Amer. Inst. of Mng. Engrs., Trans. for Oct.,1911, pp. 811-838*; $1.15.

Abstract in E. & M. J., Nov. 4, p. 901; Nov.11, p. 950; 6500 w*; 45c. Also in Mines & Minerals, Jan.,1912, p. 361; 5000 w*; 35c.

Dwight, A. S.—*Efficiency in Ore Roasting* [Lead and copper; reviews various systems].—Columbia Univ. School of Mines Quar'ly, Nov.,1911, pp. 1-18; 65c.

Abstract in Mining & Engg. World, Jan. 13,1912, p. 55; 5000 w; 10c. Also in Mng. Sci., Feb.1, p. 127; Feb.8, p. 147; Feb.15, p. 173; Feb.22, p. 189; 5000 w; 50c.

Also in German in Techn. Blätter, Feb. 10, p. 45; 750 w; 45c.

Eddy, L. H.—*Thiogen Process Demonstration;* [Treating McDougal-roaster gases for sulphur at Penn smelter, Campo Seco, Cal.].—E. & M. J., May4,1912; p. 873; 1500 w*; 25c.

Italian abstract in Rassegna Mineraria, May21, p. 286; 500 w; 45c.

Elsing, M. J.—*Handling Furnace Charges at Cananea.*—M. & S. P., May4,1912; p. 619; 1800 w*; 20c.

Emrich, H. H.—*Electrolytic Copper Refining;* [Also reverberatory refining].—Amer. Inst. Mng. Engrs., Trans.; read Feb.,1912; pp. —; $1.15.

Short abstract in Met. & Cheml. Engg., March, p. 171; 500 w; 35c.

Friedrich, K.—*Studie über die Verdichtung des Hüttenrauches;* [Studies on the various processes of smelter-fume condensation].—Inst. f. Metallographie, etc., an Freiberg; Mittlngn. f. 1910; pp. 76-95*; $3.20.

Friedrich, K. and A. Leroux.—*Arsenides and Smelter Compounds* [in German].—See Thermic Metallurgy.

Golding, C. E.—*Miami Concentrating Mill.*—Mines & Minerals, Apr.,1912; p. 545; 2200 w*; 35c.

Guess, Geo. A.—*Notes on Pyritic Smelting.*—E. & M. J., Jan.13,1912, p. 113; 7000 w; 25c.

Guillet, L.—*Metodos y progresos metalurgicos del cobre;* [Progress in smelting and electrolysis of copper; Spanish abstract of paper in Soc. d. Ingrs. Civ. France, Memoires, 1911].—Mex. Mng. Jnl., Jan., 1912, p. 53; 4400 w; 25c.

Heywood, W. E.—*Basic Lining;* [Results at Butte].—Mng. Mag.. April,1912; p. 287; 1000 w; 45c.

Holtman, —. *Das Schwimmaufbereitungsverfahren der Grube Friedrichssegen nach System Leuschner;* [The Leuschner oil-flotation process at the Friedrichssegen mines on the Lahn, Germany; chiefly for chalcopyrite, blende and galena].—Glückauf, March9.1912; pp. 388-393*; 50c.

English abstract in Mng. Jnl., Apr.20, 1912; p. 402; 1000 w; 35c.

Jacobs, E.—*Metallurgy in British Columbia in* 1911.—See Brit. Columbia.

Johns, B. S.—*Henry Johns, an Early American Copper Refiner;* [Reviews history of first smelting of Lake Superior copper in 1847].—E. & M. J., June15,1912; p. 1183; 1200 w; 25c.

Kern, E. F. and A. A. Heimrod.—*Volatilization of Gold and Silver From Their Copper Alloys.*—Columbia School of Mines Quar'ly, Nov.,1911, pp. 34-65*; 65c.

Lauck, W. J.—*Employes of the Smelting and Refining Industries;* [Nationality of laborers in western works].—Mining & Engg. World, Dec.30.1911, p. 1327; 2200 w; 10c.

Lee, G. M.—*The Granby Smelter.*—Met. & Cheml. Engg., March,1912, p. 147; 4000 w*; 35c.

Lorenz, Dr.—*Ueber elektrolytische Kupferraffinerie;* [Electrolytic refining of copper; practice at various American and European works; read to Physikalischer Ver. zu Frankfurt a. M., Feb.24,1912; abstract].—Chemiker Ztg., March26,1912; p. 336; 1000 w; 35c.

Low, V. F. S.—*Impressions Gathered While Traveling;* [Includes notes on Washoe smelter, Montana, and Garfield plant, Utah].—Australian Mng. Standd., Apr. 11,1912; p. 337; Apr.18, p. 362; Apr.25, p. —; 7000 w*; 65c.

MacGregor.—*Electrostatic Separation in the San Juan District.*—See Zinc.

Martin, Al. H.—*Progress of Smelter Smoke Control in California;* [Baghouse system at Mammoth Copper Co. plant at Kennett].—Mng. Sci., Apr.4,1912; p. 306; 2400 w*; 20c. Also described by Martin in Mines & Methods, April; p. 437; 2100 w*; 20c.

Moldenhauer, M.—*Das Filter Bei der Aufbereitung feiner sulfidischer Sande und Schlämme;* [Filters in the concentration of fine sulphide sands and slimes, especially copper].—Metallurgie, Feb.8,1912; p. 99; 2500 w*; 50c.

Nash, W. G.—*Precipitation of Copper from Mine Waters;* [History at Rio Tinto].—M. & S. P., Feb.3,1912; p. 213; 1500 w; 20c.

Nicolescu, C.—*Ueber Schmelzen von Kupferoxydul mit Kieselsäure;* [Tests of smelting of copper oxide, Cu_2O, with silica].—Metallurgie, Feb.8,1912; p. 92-99*; 50c.

Okada, Yoichi.—*Der "Mabuki" Prozess;* [The Mabuki process of copper recovery from ore as practiced in Japan].—Freiberg, Saxony; 1911; 20 pp. 6 figs; $1.00 (pamphlet).

Ossa, I. D.—*Direct Smelting of Silver-Copper Ores;* [Cristobal Colon, Chile; from Soc. Nac. Mineria Chile and London Mng. Jnl.].—Mex. Mng. Jnl., Jan.,1912, p. 36; 1000 w; 25c.

Perkins, W. G.—*Basic Lining for Converters.*—Mng. Mag., Feb.,1912; p. 119; 1000 w; 45c.

Ralli, G.—*La consommation de combustible dans la fusion des minerais de cuivre et de plomb;* [Studies of fuel combustion and consumption in the smelting of copper and of lead.—Rev. Univ. d. Mines, Vol.34. p. 213-296; Vol. 35, pp. 1-104*; $2. Abstract in Rev. de Mét'l'gie, Feb.,1912; p. 84; 2600 w; $1.15.

Ramên, A.—*Die neuesten Methoden zur Extraktion von Kiesabbränden und Kies;* [Newer developments in utilization of, and copper extraction from, pyrite and pyrite cinders; read to Polyteknisk Foren. Kristiania, Nov.29,1911; brief abstract in]

Chemiker Ztg., Jan.9,1912, p. 33; 500 w; 35c.

Read, T. T.—*Metallurgy of Copper During* 1911.—M. & S. P., Jan.6,1912, p. 26; 4000 w; 35c.

Reid, —. *Notes on the "Best Selected" Process in the Metallurgy of Copper, and an Application of the Bessemer Converter Thereto.*—Instn. of Civ. Engrs., Proc.; Vol. 185; 1911; pp. 379-381.

Richard, Dr.—*Ofen zur sulfatisierenden Röstung kupferhaltiger Kiese;* [Oven for roasting cupriferous pyrite to obtain water-soluble copper sulphate].—Chemiker Ztg., May21,1912; p. 565; 1000 w; 35c.

Richards, J. W.—*Treatment of Mine Water from the Ashio Copper Mine;* [For recovering copper and clarifying discharge].—Amer. Inst. Mng. Engrs., Trans., Bull. 66, June,1912; pp. 655-658; 1000 w*; $1.15. Reprint in Mining & Engg. World, Aug.3,1912; p. 196*; 10c.

Rzehulka, A.—*Die Bewertung der Kupfererze;* [Summary of treatment and smelter valuation of the various classes of copper ores].—Centralbl. d. Hütten & Walzwerke, Feb.25,1912; p. 100; March5, p. 119; March15, p. 139; 3600 w; 65c.

Schertel, L.—*Studien über einige Verlustquellen des Blei- und Kupferhochofenprozesses;* [Studies on some sources of loss in the balst-furnace process for lead and copper].—Freiberg Bergkademie dissert., 1911; pp. —; (thesis).

Sully, J. M.—*Milling the Ore of the Chino Mine.*—M. & S. P., March30,1912; p. 464; 3000 w*; 20c.

Tallam, Alfr.—*Concentration Analysis from Cananea Practice;* [Practice, flow sheet and costs at Can. Cons. Copper Co. Mill No. 2].—Mng. Mag., Apr.,1912; p. 272; 3000 w*; 45c.

Traphagen.—*Low-Grade Ore Problem in Colorado.*—See under Zinc.

Turner, T.—*The Behavior of Certain Alloys When Heated in Vacuo;* [Zinc distillation and copper refining; read to Instn. of Metals; discussion].—Engnrg., Jan.,19,1912, p. 89; 750 w; 30c.

Tupper, C. A.—*Copper Smelting at the Kennett Plant, Cal.*—Mining & Engg. World, Feb.10,1912; p. 337; 2000 w*; 10c.

Vuigner, M.—*Sur l'électrolyse des cuivres impurs en liqueur sulfurique;* [Note on copper electrolysis in sulfuric acid; the regeneration of bath and good deposition at cathodes].—Rev. de Mét'l'gie, Jan.,1912; p. 32; 1000 w; $1.15.

Walter, E. W.—*Air in Pyritic Smelting.*—E. & M. J., Apr.20,1912; p. 797; 2100 w; 25c.

Walker, A. L.—*The Metallurgy of Copper in* 1911.—E. & M. J., Jan.6,1912, p. 47; 4000 w; 25c.

Wanjukovf, W.—*Untersuchungen über die beim Steinschmelzen den Eintritt des Kupfers in die Schlacken beeinflussenden Umstände, über die Verbindungsform des Kupfers innerhalb der Schlacken, und über die Verminderung der Kupferverluste durch Verschlackung;* [Researches on the conditions controlling the entry of copper into the slag in smelting copper ore, on the chemical affinities of the copper in the slag, and methods of lessening copper losses in slag].—Metallurgie, Jan.8,1912, p. 1-27*; Jan.22, p. 48-62*; 80c.

Washington, L.—*New Electroplating Process;* [Italian method of depositing electrolytic copper on any insoluble surface].—U. S. Consul. Rep., June3,1912; p. 908; 750 w; 20c.

Waters, A. L.—*The Pioneer Smeltery, Arizona.*—E. & M. J., May4,1912; p. 877; 1500 w*; 25c.

Wilson, F. L.—*Experiments with the Thiogen Process;* [Sulphur recovery from smelter and roasting fumes].—M. & S. P., Apr.6,1912; p. 497; 1800 w*; 20c.

———. *Basic Lining for Converters* [Superiority at Copper Queen works, Ariz.].—Mng. Mag., Dec.,1911, p. 513; 750 w; 35c.

———. *Calumet & Arizona Smeltery;* [Outlines proposed plans].—E. & M. J., Apr.,1912; p. 682; 1000 w; 25c.

———. *Concentration of Ore Slime by Centrifugal Separation;* [Peck system at Anaconda and Cananea copper mines].—Met. & Chem. Engg., April,1912; p. 235; 2700 w; 35c.

———. *Copper Metallurgy in* 1911.—Met. & Chem. Engg., Jan.,1912, p. 2; 1400 w; 35c.

———. *El Boleo Smelting Practice.*—M. & S. P., May18,1912; p. 700, p. 685; 1800 w; 20c.

———. *Mason Valley Smeltery, Nevada.*—E. & M. J., Feb.24,1912; p. 410; 600 w*; 25c.

———. *Moderne Tiegelschmelzen;* [Modern crucible smelting for the foundry; German translation from "Fonderie Moderne"].—Eisen Ztg., March9,1912; p. 170; 2000 w; 35c.

———. *Murex Process at Cordoba Copper Mines, South Spain.*—M. & S. P., March 30,1912; p. 466; 500 w; 20c.

———. *Notes on the Elmore Flotation Process.*—Mex. Mng. Jnl., May,1912; p. 23; 1000 w*; 25c.

———. *Progresos en los hornos de Cuba;* [Progress in lead and copper metallurgy; water-jackets; electrolytic lead refining; flue dust control].—Mex. Mng. Jnl., June,1912; p. 58; 1000 w; 10c.

———. *Recent Copper Smelting;* [Compares Boleo and Anaconda plants].—M. & S. P., May18,1912; p. 685; 800 w; 20c.

———. *Smelter Fume in Japan.*—M. & S. P., March9,1912, p. 364; 1500 w; 20c.

———. *The Balance Sheet in Smelting;* [Reviews limited demand for sulphuric acid by-product of copper smelters]—M. & S. P., March30,1912; p. 461; 1200 w; 20c.

———. *The Bradley Process;* [Chlorination extraction of gold, silver and copper from waste copper slimes at Washoe concentrator].—Mng. Jnl., Apr.6,1912; p. 326; 1200 w; 35c.

———. *The Butte Central Co.'s New Concentrating Plant.*—Mining & Engg. World, May25,1912; p. 1097; 1000 w; 10c.

———. *The International Smelter, Tooele, Utah.*—M. & S. P., March9,1912, p. 371; 1100 w*; 20c.

———. *The Slime Problem;* [For copper, lead and zinc].—E. & M. J., Apr.27, 1912; p. 821; 750 w; 25c.

———. *Treating Copper Anode Residues;* [at Montana electrolytic refineries].—Mines & Minerals, May,1912; p. 622; 1600 w*; 35c.

ASSAYING; CHEMISTRY

Bolis, A.—*Quantitative Bestimmung von Kupfer in Kupfersulfat;* [Quantitative estimation of copper in copper sulphate; abstract from Gazt. Chimica Ital., 1911, No. 2, p. 374-].—Zts. f. angew. Chemie, March 1,1912; p. 426; 200 w; 45c.

Chase, T.—*Iodide Method of Copper Assay.*—Mines & Minerals, June,1912; p. 684;

1500 w; 35c. Also in Sale Lake Mng. Rev., June30, p. 24; 1400 w; 25c

Ermen, W. F. A.—*Some Basic Copper Compounds;* [Copper sulphate with sodium carbonate or bicarbonate].—Soc. of Chem'l Ind'y, Jn.; Apr.15,1912; p. 312; 1800 w; 65c.

Greaves, R. H.—*The Influence of Oxygen on Copper Containing Arsenic or Antimony;* [Read to Instn. of Metals; abstract].—Engnrg., Jan.19,1912, p. 91; Feb.9, p. 196; 5000 w*; 50c.

Hall, E. J.—*New Kink in Iodide Assay.*—E. & M. J., June15,1912; p. 1166; 1000 w; 25c.

Heath, G. L.—*The Estimation of Oxygen and Occluded Gases in Copper, and a Correction to the Electrolytic Assay in the Complete Analysis of Copper.*—Jnl. of Ind'l & Engg. Chem'y, June,1912; p. 402; 2500 w; 65c.

Keller, Edw.—*The Mathematics of Copper Sampling.*—E. & M. J., Apr.6,1912; p. 703; 3000 w; 25c.

Kendall, E. C.—*Determination of Copper by a Modification of the Iodide Method;* [From Amer. Chem'l. Soc. Jnl., Dec.,1911].—M. & S. P., Dec.30,1911, p. 838; 1500 w; 20c. Also in Cheml. Engr., Jan.,1912, p. 31; 2600 w; 35c. Also in Mining & Engg. World, Feb.17, p. 409; 2000 w; 10c.

Kern, Edw. F. and A. Heimrod.—*The Determination of Gold and Silver in Copper Bullion.*—Met'g'l & Cheml. Engg., Oct.,1911, p. 496; 3100 w; 35c. Abstract in Mining & Engg. World, Jan.13,1912; p. 74; 2000 w; 10c.

Lathe, F. E.—*Copper Determinations at Granby Smelter, B. C.*—E. & M. J., June1, 1912; p. 1071; 3000 w; 25c.

Lewis, E. A.—*Limits of Accuracy in Copper and Brass Analysis.*—Soc. of Chem'l Ind'y, Jnl.; Feb.15,1912; p. 96; 1200 w; 65c.

Liddell, D. M.—*Sampling Errors Due to Copper Bar Shapes.*—E. & M. J., Dec.16, 1911, p. 1173; 1000 w*; 25c. Abstract in Mining & Engg. World, Feb.10,1912, p. 361; 800 w*; 10c.

Liddell, D. M.—*The Assay of Copper Bullion.*—E. & M. J., Dec.23,1911, p. 1213; 650 w; 25c.

Masselon, E.—*Influence de l'oxygen dans le cuivre;* [Influence of oxygen in copper].—Métallurgie, Feb.28,1912, p. 131; 750 w; 35c.

Münker, E.—*Ueber die Einfluss geringer Mengen Phosphor, Mangan und Zinn auf die physikalischen Eigenschaften von Kupfer;* [Influence of slight amounts of phosphorus manganese or tin upon the properties of copper].—Metallurgie, March22, 1912; p. 185-198*; 50c.

Popper, Edw.—*New Kink in Iodide Copper Assays.*—E. & M. J., May25,1912; p. 1021; 500 w; 25c.

Sale, A. J.—*Accurate "Slop-Coppers."*—M. & S. P., Jan.27,1912; p. 165; 1000 w; 20c.

Sandonnini, C.—*Thermische Analyse des Systems Kupferchlorid-Kupferchlorür;* [Fusing characteristics of the copper chlorides; brief German abstract of paper read in Italian to Reale Inst. Veneto di Scienze, Nov., 1911].—Chemiker Ztg., Feb.27,1912; p. 221; 100 w; 30c.

Ward, H. L.—*Oxalate-Permanganate Process for the Determination of Copper Associated with Cadmium, Arsenic, Iron or Lead.*—Amer. Jnl. of Sci., May,1912; p. 423-433; 65c.

Windisch, R.—*Ueber quantitative Kupferbestimmung mittels unterphosphoriger Säure bezw, Natriumhypophosphit;* [The Dallimore process of quantitative estimation of copper in sulphates by means of hypophosphites, especially sodium hypophosphite; read to Ungar. Naturw. Ver., chemisch-mineralog. section, Feb.,1912; brief abstract in] Chemiker Ztg., May28, 1912; p. 596; 100 w; 35c.

USES

Hasenclever, Max.—*Manufacture of Sulfuric Acid;* [Progress with pyrite, blende, galena and copper; Hunter Memorial lecture, Liverpool Univ., Oct.,1911].—E. & M. J., Jan.20,1912, p. 175; 3000 w; 25c.

Ingalls, W. R.—*How the Metals are Sold: 1—Copper.*—E. & M. J., May4,1912; p. 887; May11, p. 939; 9000 w; 40c. Reprint in Mines & Methods, May,1912; p. 485; 9000 w; 20c.

Abstract in Italian in Rassegna Mineraria, June1,1912; p. 305; 2000 w; 45c.

Lelong, A., and E. Mairy.—*Traité Pratique de Fonderia;* [Manual of Foundry Practice; iron, malleable iron, steel, copper and alloys].—Paris, 1912; 2 volumes; pp. 659; 512; (book).

Liddell, D. M.—*The Treatment of Metallic Junk.*—E. & M. J., March2,1912; p. 452; 4000 w*; 25c.

Nelson, W. A.—*Sulphuric Acid Manufacture in Tennessee* [At Ducktown copper smelters].—Mng. Sci.. Feb.8.1912; p. 149; 2000 w*; 20c. Reprinted in Mines & Methods, Feb.,1912, p. 407*; 20c.

Pannell, E. V.—*The Characteristics of Copper vs. Aluminum Overhead-Line Conductors.*—El. Rev. (London), May10,1912; p. 771; May17, p. 815; 5000 w; 50c. Also in Canadian Engr., July18, p. 181; 4000 w*; 25c.

Rapier, C. V.—*Copper Buying and Drawing; The Economy of the Draw Bench.*—El. Rev. (London), May31,1912; p. 884; 2000 w; 35c.

Rosenhain, W., and Archbutt, S. L.—*Aluminum-Zinc-Copper Alloys.* (See Alloys.)

Siepke, F. W.—*Die Verhüttung kupferhaltiger Industrieabfälle;* [Smelting of copper-bearing industrial waste-metal in Germany].—Metallurgie, Feb.22,1912, pp. 121-133; 9000 w*; 50c.

———. *Standard Specifications for Copper Wire Bars;* [Amer. Soc. f. Testing Materials].—E. & M. J., Jan.20,1912, p. 181; 1000 w; 25c.

———. *The Uses of Copper-Clad Iron Wire.*—El. Rev. (London), June7,1912; p. 940; 3000 w; 35c.

BRASSES; BRONZES; COPPER ALLOYS

See under Alloys (Non-Ferrous').

STATISTICS; MARKET REVIEW

Appelbaum, M. E.—*Copper, Corporations and Prices;* [Market review, 1911].—M. & S. P., Jan.6,1912, p. 7; 1200 w; 35c.

Atherton, L. M.—*The Copper Trade in 1911.*—Iron Age, Jan.4,1912; p. 62; 1500 w; 65c.

Brandeis, Goldschmidt & Co.—*Metall Jahresbericht* 1911; [Review of copper production and markets, 1911].—Montan Ztg., March1,1912; p. 82; 2400 w; 45c.

Butler, B. S.—*The Production of Copper*

in 1910; [Mine, smelter and refinery production and review; Alaska, Ariz., Cal., Colo., Ida., Mich., Mont., Nev., N. Mex., Tenn., Utah, N. Hamp., N. Car., Oreg., Penn., S. Dak., Wyo., Va., Wash.].—U. S. Geol. Survey, Mineral Resources f. 1910; 1911; 70 pp.; 10c.

Butler, B. S.—*Production of Copper in the U. S. in* 1911; [Advance statement of U. S. Geol. Survey].—Mining & Engg. World, May11,1912; p. 1007; 1000 w; tables; 10c.

Douglas, Jas.—*Ratio of Copper to Pig-Iron Consumption.*—E. & M. J., Apr.20,1912; p. 776; 1000 w; tables; 25c. Reprint in Iron Age, May2, p. 1097; 30c.

Downey, C. J.—*Copper Mines Operated Under Restraint;* [Reviews production in U. S. in 1911].—Mng. Sci., Jan.25,1912, p. 67; 2000 w*; 25c.

Phalen, W. C.—*Sulphur, Pyrite and Sulphuric Acid in* 1911; [Production in U. S., with "Notes on the Manufacture of Sulphuric Acid From Smelter Fumes at Ducktown, Tenn.," by F. B. Laney; pp. 24-30].—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 30 pp.; 20c.

Schnatterbeck, C.—*Metal Markets in* 1911.—Mng. Sci., Jan.25, p. 80; 5300 w*; 25c.

Stevens, H.—*The Past, Present and Future of Copper.*—Amer. Mng. Congr., 1911; Proc., Vol. 14; pp. 146-158.

Abstract in Mining & Engg. World, Nov. 4, p. 919; 2700 w; 10c. Also in M. & S. P., Nov.4, p. 584; 3200 w*; 20c. Also in Mng. Sci., Nov.16, p. 462; 3500 w; 20c. Also in Mines & Methods, Nov., p. 358; 6000 w; 25c. Also in Canadian Mng. Jnl., Dec.1, p. 766; 6000 w; 25c. Also in Mex. Mng. Jnl., Dec., p. 41; 2800 w; 25c. Also in Mng. Investor, Dec.11, p. 60; 2000 w; 20c.

Thompson, F. C.—*Coppers at the Close of* 1911.—Banker & Investor Mag., Jan., 1912; p. 564; 3500 w; 35c.

Aaron Hirsch & Sohn.—*World's Copper Production in* 1911.—Mining & Engg. World, June1,1912; p. 1138; 100 w; table; 10c.

———. *Copper and Other Syndicates;* [Discusses proposed combination in U. S.]. Mining & Engg. World, Dec.23,1911, p. 1253; 1000 w; 10c.

———. *Copper Production in* 1911; [In U. S. and world; figures of "Mineral Industry" and of Copper Producers' Asso.].—E. & M. J., May25,1912; p. 1044; 600 w; 25c.

———. *Le nouveau marché du cuivre du Havre;* [The new copper exchange at Havre, France; articles of incorporation].—Métallurgie, Feb.14,1912; p. —; Feb.21, p. 116; Feb.28, p. 132; 2000 w; 65c.

German abstract in Erzbergbau, March 15, p. 81; 1600 w; 35c.

———. *Mining Low-Grade Ore During Periods of High Price.*—E. & M. J., June8, 1912; p. 1116; 1000 w; 25c.

———. *N. Y. Metal Prices for* 14 *Years.*—Iron Age, Jan.18,1912; p. 192; charts; 30c.

———. *Porphyry Coppers and Ore Reserves;* [Compares Utah, Ray, Chino and Nevada].—M. & S. P., May11,1912; p. 653; 1200 w; 20c.

———. *Status of the Porphyry Copper Producers.*—Met. & Cheml. Engg., June, 1912; p. 324; 1500 w; 35c.

———. *Status of Michigan's Coppers;* [Discusses possible economies].—Mining & Engg. World, Dec.9,1911, p. 1153; 1200 w; 10c.

———. *The Copper Industry in* 1911; [Production and market review].—E. & M. J., Jan.6,1912, p. 7; 4500 w; 35c.

———. *The Metal Markets in* 1911; *Copper, Tin.*—Mng. Jnl., Jan.20,1912; p. 59; 5000 w; 35c.

———. *The World's Copper Mining Industry in* 1911; [Reviews production].—Mining & Engg. World, Jan.27,1912; p. 158; 2500 w; 10c.

GEOLOGY

Bergeat, Alfr.—*La granodiorita de Concepcion del Oro en el Estado de Zacatecas y sus formaciones de contacto;* [The granodiorites of Concepcion del Oro, Zacatecas, and geology of the contact ore deposits; metasomatic chalcopyrite at contact, copper vein in granodiorite; lead-zinc-silver in limestone; auriferous quartz veins].—Inst. Geol. Mex., Bol. 27; 1911; 109 pp*; $1.

Hore, R. E.—*Decrease of Values in Ore Shoots with Depth;* [Michigan copper; Cobalt, Ont., silver; Porcupine, Ont., gold].—Canadian Mng. Jnl., Apr.15,1912; p. 260; 4000 w; 25c.

Kemp, Jas. F.—*Contact Deposits;* [Genesis of iron, copper and other contact orebodies].—"Types of Ore Deposits," by H. F. Bain, and others; 1911; pp. 190-201.

Kirk, Chas. T.—*Conditions of Mineralization in the Copper Veins at Butte, Mont.*—Econ. Geol'y. Jan.,1912; pp. 35-82*; 65c.

Abstract in Mng. Sci., Apr.4, p. 311; 3200 w; 20c.

Knox, H. H.—*Criteria for Replacement Ore Bodies;* [Discusses abundance of replacement deposits, especially pyrites, in non-limestone formations].—Econ. Geol'y, April-May,1912; p. 295; 750 w; 65c.

Lane, A. C.—*Native Copper Deposits.*—"Types of Ore Deposits," by H. F. Bain, and others; 1911; pp. 133-139*.

Reprinted from Canadian Mng. Inst., Bull., 1911. Abstract in Mining World, Apr.8,1911, p. 731; 2700 w; 10c. Also in W. Australian Mng., etc., Jnl., May27,1911, p. 8; 2700 w; 50c. Also in Mng. Sci., Feb. 29,1912, p. 211; 2800 w; 20c.

Lindgren, W.—*Some Modes of Deposition of Copper Ores in Basic Rocks.*—Econ. Geol'y, Oct.-Nov.,1911, p. 687-701; 65c.

Abstract on zeolite-bearing copper in Mining & Engg. World, Dec.30,1911, p. 1311; 2500 w; 10c.

Tovote, W. L.—*Types of Porphyry Copper Deposits;* [Discusses geology and genesis of types of low-grade copper deposits in Utah, Arizona, Braden (Chile) and Nacozari (Sonora)].—M. & S. P., May18,1912; p. 686; 3000 w*; 20c.

Tovote, W. L.—*Magmatic Origin of Ore-Forming Solutions;* [In Arizona copper district especially; discusses Tolman's paper].—M. & S. P., Apr.27,1912; p. 601; 1500 w; 20c.

Winchell, H. V.—*Secondary Sulphide Enrichment.*—E. & M. J., Feb.17,1912; p. 364; 5000 w; 25c.

CHAPTER IV.—GOLD; IRON AND STEELS.

GOLD

Goldfields; Mining; Production

PACIFIC COAST STATES

For gold dredging in California, see under California; also under Dredging.

Davis, Chas. H.—*The Los Burros Mining District;* [Monterey county, Cal., gold camp].—M. & S. P., May 18, 1912; p. 696; 2800 w*; 20c.

Del Mar, Alg.—*The High-Grade District, California.*—E. & M. J., Apr.20,1912; p. 799; 500 w*; 25c.

Eddy, L. H.—*Plymouth Consol. Mines, Cal.*—E. & M. J., Jan.20,1912, p. 181; 1800 w; 25c.

Howard, C. A.—*The Camp of High Grade, Cal.*—Los Angeles Mng. Rev., May 4,1912; p. 11; 1000 w; 20c.

Kerr, M. B.—*Mines of the Southern Sierras of California and Nevada;* [Review of gold resources].—M. & S. P., Jan.6,1912, p. 34; 1800 w*; 35c.

Lauck, W. J.—*Immigrant Gold-Mine Workers in Amador County, Cal.*—M. & S. P., Feb.17,1912; p. 279; 1200 w; 20c.

Mace, C. H.—*Rogue River Gravel Beds, Oreg.*—M. & S. P., March23,1912; p. 435; 1200 w*; 20c.

Martin, A. H.—*The Headlight, a Notable California Gold Mine.*—Mining & Engg. World, Feb.3,1912; p. 286; 1200 w; 10c.

Martin, A. H.—*Review of Mining in the U. S. in* 1911; *California.*—Mining & Engg. World, Jan.27,1912; p. 203; 8000 w; 10c.

Morse, J. G.—*Mining Operations in Sierra County, Cal.*—Mng. Sci., Feb.1,1912; p. 129; 1600 w*; 20c.

Parks, H. M.—*The Economic Geological Resources of Oregon.*—Oreg. Bur. Mines, Bull. Ser. 5, No. 2; 1912; 115 pp*; 50c.

Platts, J. B.—*Occurrence of Gold "Pockets" in Josephine County, Oregon.*—Mining & Engg. World, Apr.27,1912; p. 909; 1000 w; 10c.

Stines, N. C.—*Geology of High Grade District, Cal.*—Mng. Investor, May6,1912; p. 192; 1600 w; 25c.

Stines, N. C.—*The Camp of High Grade in Northern California;* [Hoag district, Modoc county].—Mng. Sci., Jan.11,1912, p. 27; 2500 w; 20c.

Storms, Wm. H.—*Mineral Deposits of the Sierra Nevada, Cal.*—Mining & Engg. World, Jan.20,1912; p. 121; 2000 w; 10c.

Stovall, D. H.—*Review of Mining in the U. S. in* 1911; *Oregon.*—Mining & Engg. World, Jan.27,1912; p. 233; 2400 w; 25c.

Umpleby, Jos. B.—*Geology and Ore Deposits of the Myers' Creek and Oroville-Nighthawk Mining Districts.*—Washington (State) Geol. Surv., Bull. 5, 1911; 111 pp*; 50c.

Yale, C. G.—*Gold Production in California;* [Statistical and general review].—Amer. Inst. Mng. Engrs., Bull. 63; March, 1912; pp. 261-266; $1.15. Abstract in Mng. Sci., Apr.11, p. 329; 1600 w; 20c.
Italian abstract in Rassegna Mineraria, Junel, p. 312; 6000 w; 45c.

———. *Preparations for Reopening Plymouth Mines, Amador County, Cal.*—E. & M. J., Apr.6,1912; p. 682; 1200 w*; 25c.

———. *Review of Mining in the U. S. in* 1911; *Washington.*—Mining & Engg. World, Jan.27,1912; p. 241; 2400 w; 25c.

———. *The High-Grade District, Cal.*—Salt Lake Mng. Rev., Apr.30,1912; p. 11; 5000 w*; 25c.
The High Grade district is also described in Mining & Engg. World, May11. p. 999; 1200 w*; 10c. Also in Mng. Investor (reprint from High Grade "News"), May13, pp. 209, 214; 2500 w; 25c. Also in E. & M. S., May18, p. 972; 750 w; 25c. Also in M. & S. P., May25, p. 715; 1100 w; 20c. Also in Mines & Minerals, June, p. 681; 500 w*; 35c.

———. *The Rand and California;* [Similarity of working conditions].—S. Afr. Mng. Jnl., Dec.30,1911, p. 597; 2000 w; 35c.

ROCKY MOUNTAIN STATES AND DAKOTAS

Ackerman, H. F.—*The Nevada Wonder Mining Co.*—Salt Lake Mng. Rev., March30, 1912; p. 11; 1500 w*; 25c.

Adamson.—*Nevada,* 1911.—See Nevada.

Bell.—*13th Annual Idaho Report.*—See under Idaho.

Brown, T. A.—*The Placer Mines of Summit County, Colo., and Geological Structure Thereof.*—Mng. Sci., Feb.15,1912; p. 171; 1000 w*; 20c.

Buckley, E. R.—*Geology of the Jarbidge Mining District, Nevada.*—Mining & Engg. World, Dec.16,1911, p. 1209; 2800 w*; 10c.

Butler, G. M.—*The Gold of Newlin's Gulch near Denver, Colo.*—Mng. Sci., June 6,1912; p. 486; 1300 w*; 20c.

Collins.—*Colorado,* 1911.—See Colorado.

Copenharve.—*Montana,* 1911.—See Montana.

Cutler, H. C.—*Como, Nevada;* [Gold camp].—M. & S. P., Apr.13,1912; p. 539; 1400 w*; 20c.

Daugherty, R. L.—*South Dakota Gold and Tin Mines;* [Review for 1911].—M. & S. P., Jan.6,1912, p. 77; 750 w; 35c.

Defty, W. E.—*The Vulture Mine, Arizona.*—E. & M. J., May25,1912; p. 1044; 1000 w*; 25c.

Dinsmore, C. A.—*United Gold Mines Co.;* [at Congress, Ariz.].—El Paso Mng. Jnl., Feb.,1912; p. 8; 1000 w; 35c. Also in Mining & Engg. World, May11, p. 1006; 1000 w*; 10c.

Dinsmore, Chas. A.—*The History and Development of the Gold Road Mine;* [Kingman, Arizona].—Mining & Engg. World, Dec.23,1911; p. 1275; 1700 w*; 10c. Also in El Paso Mng. Jnl., Dec.,1911; p. 10; 1400 w; 35c.

Eddy, C. E.—*Reminiscences of Stampede for Gold in Nevada Boom.*—Mines & Methods, April,1912; p. 458; 3600 w; 25c.

Fisher, F. L.—*Montana,* 1911.—See Montana.

Hall, F.—*Colorado,* 1911.—See Colorado.

Heikes, etc.—*Metal Production in Western and Alaskan Mines,* 1910.—See under U. S.

Henahen.—*Colorado,* 1911.—See Colorado.

Jamison.—*Wyoming,* 1911.—See Wyoming.

Jamison, C. E.—*The Gold Mines South of Lander, Wyoming;* [Extracts from Bull.

2, Wyo. Geol. Survey].—Mining & Engg. World, Feb.24,1912; p. 468; 1200 w; 10c.

Knapp, J. G.—*Promising Condition in Bullion Mining District, Nev.*—Salt Lake Mng. Rev., Feb.15,1912; p. 11; 1600 w*; 25c.

Lakes, A.—*Geology of the Breckenridge Placers.*—Mines & Minerals, Feb.,1912; p. 430; 4000 w*; 35c.

Martin, A. H.—*Present Status of Manhattan District, Nevada.*—Mng. Sci., March 14,1912, p. 248; 1600 w*; 20c.

McGee, G. T.—*Gold-Silver Mines of Montana;* [Review for 1911].—M. & S. P., Jan.6, 1912, p. 83; 2000 w*; 35c.

McLaren, Alex.—*Gold and Rare Metal Mining near Llano, Texas;* [Gold-platinum-bismuth].—Mng. Sci., May2,1912; p. 394; 300 w*; 20c. Also in Salt Lake Mng. Rev., May15, p. 11; 2000 w*; 25c.

Perkins, E.—*Arizona,* 1911.—See Arizona.

Pickard, B. O.—*The Oro Grande District in Grant County, New Mexico.*—Mng. Sci., Feb.15,1912; p. 166; 3200 w*; 20c.

Ralston, O. C.—*Leadville, Colo., Fissure Veins.*—Mines & Minerals, Apr.,1912; p. 549; 1000 w; 35c.

Reagan, A.—*Ft. Apache District.*—See Arizona.

Rickard, T. A.—*Two Famous Mines, II;* [History of Camp Bird mine, Ouray, Colo.].—Mng. & S. Press, Dec.30,1911, p. 827; 2000 w*; 20c.

Rickard, T. A.—*The Saddle Reef;* [Geology and genesis of Bendigo, Vict., ore bodies].—"Types of Ore Deposits," by H. F. Bain, and others; 1911; pp. 172-189*.

Root, W. A.—*The Dry Placers of Yuma County, Arizona.*—Mining & Engg. World, April6,1912; p. 758; 1200 w; 10c.

Schrader, F. C.—*A Reconnaissance of the Jarbidge, Contact and Elk Mountain Mining Districts, Elko County, Nev.*—U. S. Geol. Survey, Bull. 497; 162 pp*; 10c.
Abstract on Jarbidge in Mng. Sci., Apr. 25,1912; p. 366; May2, p. 387; 5000 w*; 30c. Also in E. & M. J., May4, p. 890; 1100 w; 25c. Also in Los Angeles Mng. Rev., May4, p. 7; 2500 w; 20c.

Scott, W.—*Idaho,* 1911.—See Idaho.

Sheldon, G. L.—*The Yellow Jacket Mine, Idaho;* [Lemhi county].—E. & M. J., Jan. 27,1912, p. 221; 2500 w; 25c.

Simmons, J.—*Review of Mining in the U. S. in* 1911; *S. Dakota.*—Mining & Engg. World, Jan.27,1912; p. 235; 3400 w; 25c.

Sperling, G. — *Timber Expansion in Flumes; Causes and Remedies;* [Experiences in Boise County placers, Idaho].—Mining & Engg. World, March16,1912; p. 609; 1600 w; 10c.

Stewart, S. O.—*The Old Hat Mining District, Pinal County, Ariz.*—Mining & Engg. World, May4,1912; p. 952; 500 w; 10c.

Stoneham, W. J.—*Nevada,* 1911.—See Nevada.

Tolman, C. F.—*Arizona,* 1911.—See Arizona.

Trevor, T. G.—*Ancient Mine Workings in the Transvaal.*—See under Transvaal.

Walter, P.—*New Mexico,* 1911.—See N. Mex.

Zalinski, E.—*Utah,* 1911.—See Utah.

Zehring, W.—*Utah,* 1911.—See Utah.

———. *California in* 1911.—Mng. Jnl., Jan.6,1912; p. 13; 2500 w; 35c.

———. *Idaho,* 1911.—Mining & Engg. World, Jan.27,1912; p. 213; 1500 w; 10c.

———. *Henry Mountain Lode* and *Placer Gold;* [White Canyon district, Garfield county, Utah].—Salt Lake Mng. Rev., Jan.15,1912, p. 11; 2200 w*; 25c.

———. *Mining in Nevada in* 1911.—E. & M. J., Jan.6,1912; p. 67; 3000 w; 25c.

———. *Mining in South Dakota in* 1912.—E. & M. J., Jan.6,1912, p. 65; 1200 w; 25c.

———. *Report of the Goldfield Con. Mines Co.* [For year ending Oct.31,1911].—M. & S. P., Feb.13,1912; p. 196; 3000 w; 20c.

———. *San Domingo Placers;* [60 miles from Phoenix, Ariz.].—El Paso Mng. Jnl., March,1912; p. 13; 1000 w; 35c.

———. *Telluride Zone in the San Juan Region.*—Mng. Sci., Feb.29,1912; p. 214; 500 w; 20c.

EASTERN, CENTRAL AND SOUTHERN STATES

Ashley, G. H.—*Goldfields of Tennessee; Coker Creek Area;* [Abstract from "Resources of Tennessee"].—Mining & Engg. World, Oct.7,1911; p. 695; 3000 w*; 10c. Also in M. & S. P., Oct.14, p. 491; 1500 w*; 20c. Also in Mines & Minerals, Apr.,1912; p. 547; 2200 w; 35c.

Newland, D. H. — *Adirondack Gold Schemes.*—E. & M. J., Feb.24,1912; p. 392; 750 w; 25c.

Pratt and Berry.—*N. Carolina,* 1908-1910.—See under N. Carolina.

Reagan, A. B.—*Mining in St. Louis and Koochiching Counties, Minnesota;* [Gold and iron].—Mining & Engg. World, June1, 1912; p. 1150; 750 w; 10c.

Watson, T. L.—*An Association of Native Gold with Sillimanite;* [Coosa creek, Union county, Ga.].—Amer. Jnl. of Sci., March, 1912; p. 241; 1200 w*; 65c.

———. *Gold in Michigan.*—E. & M. J., May18,1912; p. 1000; 1000 w; 25c.

ALASKA; WESTERN CANADA

Brewer, Wm. M.—*The Kenai Peninsula and Cook Inlet Free-Milling Gold Belt, Alaska.*—Brit. Columbia Mng., etc., Record. Oct.,1912, p. 78; 1200 w; 35c.

Brooks.—*Alaska,* 1911.—See under Alaska.

Brooks, Alfr. H.—*Mining in Alaska;* [Review for 1911; preliminary report of U. S. Geol. Survey].—Los Angeles Mng. Rev., Dec.30,1911, p. 8; 2000 w; 20c.

Cole, G. C.—*New Gold Discovery in Yukon;* [60-Mile river, 120 miles sw. of Dawson].—U. S. Consul. Rep., Jan.29,1912, p. 460; 400 w; 20c.

Hedley, R. R.—*British Columbia in* 1911.—See under Br. Columbia.

Hershey, O. H.—*Geology at the Treadwell Mines, Alaska.*—"Types of Ore Deposits," by H. F. Bain, and others; 1911; pp. 157-171. Reprinted from Mng. & Sc. Press, Feb.25 and March4,1911.

Jacobs, E.—*Review of Mining and Production in British Columbia in* 1911.—Canadian Mng. Jnl., Jan.1,1912; p. 7; 1500 w; 25c. Also in M. & S. P., Jan.6,1912, p. 68; 3000 w; 35c. Also in E. & M. J., Jan.6, p. 75; 2000 w; 35c. Also in Mining & Engg. World, Jan.27, p. 261; 7000 w; 25c.

Jones, J. E.—*Discovery of Gold in Manitoba;* [Manitonas district].—U. S. Consul. Rep., Feb.12,1912; p. 653; 300 w; 20c.

Knopf, Ad.—*The Sitka Mining District, Alaska.*—U. S. Geol. Survey, Bull. 504; 32 pp*; 10c. Abstract in Mining & Engg. World, Feb.24,1912; p. 457; March 2, p. 517; 8000 w*; 20c. Also in M. & S. P.,

March2, p. 332; 4500 w; 15c. Also in Mng. Sci., March7, p. 231; 2200 w*; 20c. Also in Mines & Methods, March, p. 439; 1800 w*; 20c.

Lakes, A.—*Present Outlook and Conditions in the Klondike Region, Yukon.*—Mining & Engg. World, Apr.27,1912; p. 916; 1400 w; 10c.

Lewington, G. A. R.—*Alaska and the Yukon;* [Prospecting conditions and regulations, etc.].—M. & S. P., March30,1912; p. 473; 1800 w*; 20c. Abstract in Mng. Mag., Apr.,1912; p. 280; 1000 w; 45c.

Martin, G. C. and F. J. Katz.—*A Geologic Reconnaissance of the Iliamna Region, Alaska.*—U. S. Geol. Surv., Bull. 485; 1912; pp. 138*; 10c.

Perry, O. B.—*Yukon Gold;* [Review of dredging and sluicing operations of Yukon Gold Co. in 1911].—M. & S. P., May11,1912; p. 658; 1400 w; 20c.

Redepenning, —. *Beiträge zur Kenntnis einiger wichtiger Goldvorkommen in Amerika;* [Some of the more important gold deposits of America; Alaska (Nome, Fairbanks placers, Unga and Douglas I'ds lodes); French Guiana dredging].—Zts. f. d. Berg-, H-, & Salinenwesen, Vol. 59; No. 5, 1911; pp. 695-707; $1.15.

Robertson, W. F.—*British Columbia,* 1911.—See under Br. Columbia.

Storm, L. W.—*The Valdez Gold Mining District, Alaska.*—Mining & Engg. World, March23,1912; p. 653; 3600 w*; 10c.

Tyrrell, J. B.—*The Law of the Pay-Streak in Placer Deposits;* [Especially in Klondike district].—Instn. of Mng. & Met'l'gy, Bull. 92, May,1912; pp. 13*; 50c. (Discussion), Bull. 93, June,1912; pp. 3-12. Abstract in M. & S. P., June1, p. 760; 2800 w*; 20c. Also in Canadian Mng. Jnl., June1, p. 362; 5000 w*; 25c. Also in Mining & Engg. World, June8, p. 1195; 4000 w*; 10c. Also in Mng. Sci., June13, p. 508; 4000 w*; 20c. Also in Mines & Methods, June, p. 512; 4000 w*; 25c.

Williams, Percy.—*Mining on the Coast of British Columbia;* [Review of various coastal gold camps].—Mng. Mag., Dec.,1911, p. 449; 1200 w*; 35c.

———. *Cons. Mng. & Smltg. Co., Trail Smelter Output,* 1911.—See under Lead.

———. *A Sketch of the Atlin District, British Columbia;* [Gold telluride ores].—Mining & Engg. World, June1,1912; p. 1144; 500 w; 10c.

———. *Gold Ores of Valdez, Alaska.*—Brit. Columbia Mng., etc., Record, Oct., 1911, p. 83; 900 w; 25c.

———. *Sheep Creek;* [Discusses development of this gold field].—Brit. Columbia Mng., etc., Record, Nov.,1911, p. 118; Dec., p. 144; Jan.,1912; p. 178; Feb., p. 216; March, p. 236; 15,000 w; $1.50.

EASTERN CANADA

Baelz, W.—*Reisebericht aus den Goldfeldern des nördlichen Ontarios;* [Notes on a trip to the goldfields of northern Ontario].—Zs. f. prakt. Geol., Nov.,1911, pp. 377-385; 75c.

English translation by T. L. Walker, "The Goldfields of Northern Ontario," in Canadian Mng. Jnl., May1,1912; p. 299; 6000 w*; 25c.

Ball, H. A.—*Placer Mining in the Province of Quebec;* [Ruisseau des Meules district].—M. & S. P., May25,1912; p. 727; 1800 w; 20c.

Burrows, A. G.—*The Porcupine Gold Area of Northern Ontario;* [Geology; summary of more complete official report].—Canadian Mng. Inst., Jnl., No. 16, Oct.,1911, pp. 59-63; $1.20.

Cirkel, F.—*Hydraulicking in Beauce County, Quebec.*—E. & M. J., June1,1912; p. 1083; 4800 w*; 25c.

Cole, A. A.—*The Mining Industry in that Part of Northern Ontario Served by the T. & N. O. Ry.*—Toronto, 1912; 57 pp.*; 75c.

Davis, N. B.—*The Character and Possible Origin of the Green Dolomites of Northern Ontario* [Gold fields].—Canadian Mng. Inst., Jnl., No. 16, Oct.,1911, pp. 173-184*; $1.20.

Dobbs, W. S.—*Vipond Porcupine Gold Mines Co., Ltd.*—M. & S. P., June1,1912; p. 763; 750 w; 20c.

Gibson, T. W.—*Ontario,* 1911.—See Ontario.

Gray, Alex.—*The Porcupine Outlook.*—Mng. Jnl., Jan.6,1912, p. 35; 4500 w; 35c.

Gray, Al.—*Milling Stage Attained at Porcupine.*—Mng. Jnl., Apr.27,1912; p. 420; 2000 w; 35c.

Hall, A. E.—*Speeds and Cost of Diamond Drilling at Porcupine, Canada.*—Columbia School of Mines, Quar'ly; April, 1912; pp. 229-232; 1500 w; 65c. Abstract in Engg. & Contractg., Apr.24, p. 462; 1000 w; 20c. Also in Mng. Sci., May30, p. 475; 1000 w; 20c.

Haultain, H. E. T.—*Silver and Gold Mining in Ontario;* [Review for 1911].—Canadian Engr., Jan.11,1912, p. 143; 1000 w; 30c.

Hille, F.—*A Few Remarks on Some of the Gold Deposits of Ontario;* [Discusses their promotion and development].—Canadian Mng. Jnl., May15,1912; p. 333; 1500 w; 25c.

Holman, C. V. and F. P. Ronnan.—[*Discussion of Possibilities of Profitable Gold Mining in Nova Scotia*].—Ind'l Advocate, March,1912; p. 7-12; 8000 w; 35c.

Hore, R. E.—*Mines and Ores of Porcupine.*—E. & M. J., May4,1912; p. 891; 2600 w*; 25c.

Hughes, Ben.—*Northern Ontario, The Land of Promise.*—Canadian Mng. Jnl., March1,1912, p. 150; 2600 w; 25c.

Hughes, B.—*Review of Mining in Foreign Countries in* 1911; *Ontario* [Cobalt and Porcupine].—Mining & Engg. World, Jan.27,1912; p. 267; 4500 w; 25c.

Ingalls, W. R.—*A Visit to Porcupine;* [Chiefly on Hollinger and Dome properties].—E. & M. J., March30,1912; p. 645; 2500 w*; 25c.

Machin, H. A. C.—*Lake of the Woods, Ontario.*—Canadian Mng. Jnl., March1,1912, p. 147; 1000 w; 25c.

McMillan, J. G.—*Report on the Geology of the Area Along the T. & N. O. Ry., Trial Line Between Gowganda and Porcupine.*—Toronto, 1912; 24 pp.; 75c.

Abstract in Mining & Engg. World, July 20, p. 110; 2200 w; 10c.

Moore, E. S.—*The Sturgeon Lake Goldfield.*—Ontario Bureau of Mines, 20th. Ann. Rep., 1911; pp. 133-157*; $1. Reprinted in Canadian Mng. Jnl., Nov.1,1911, p. 701; 7500 w*; 25c. Abstract in Mng. Sci., March 21,1912; p. 272; 2000 w*; 20c.

Pickings, H. B.—*Metalliferous Mines.*—N. Scotia Dept. of Mines, Rep. f. 1911; 1912; pp. 187-231*; $1.

Rea, T. H.—*The Rea Mine, Porcupine.*—Canadian Mng. Jnl., Jan.1,1912, p. 16; 1400 w*; 25c.

Richards, Wm. J.—*Lake of the Woods*

Mining District, Ontario.—Mines & Minerals, June,1912; p. 665; 1600 w*; 35c.

Rickard, T. A.—*The Domes of Nova Scotia.*—Instn. of Mng. & Met'l'gy; Bull. 90, March,1912; 55 pp.*; 50c. (Discussion), Bull. 92, May, pp. 35-38.

Abstract in Canadian Mng. Jnl., Apr.1, p. 224; Apr.15, p. 273; May1, p. 310; May 15, p. 345; 16,000 w*; 80c. Also in M. & S. P., March30, p. 492; 4000 w*; 20c. Also in Ind'l Advocate, Apr.,1912; p. 7; May, p. 7; 13,000 w; 65c.

Russell, H. Y.—*Notes on Porcupine;* [Ore bodies and geology].—E. & M. J., March23,1912; p. 594; 1000 w; 25c.

Shaw, S. F.—*Some Notes on Porcupine;* [Geology and ores of various properties].—E. & M. J., Dec.23,1911, p. 1223; 3500 w; 25c.

Thomson, G. W.—*Diamond Drill Results at Pearl Lake, Porcupine, Ont.*—Canadian Mng. Jnl., Apr.1,1912; p. 238; 2000 w; 25c.

Willrich, G.—*Gold Mining Revival in Quebec Province.*—U. S. Consul. Rep., March8,1912; p. 992; 400 w; 20c.

Reprint in Mining & Engg. World, May 25, p. 1094; 10c.

———. *Hollinger Reserve Mines of Porcupine.*—Canadian Mng. Jnl., Dec.15, 1911, p. 804; 1000 w*; 25c.

———. *McKenzie Gold Mine;* [From report of Chibougamau Commission].—Canadian Mng. Jnl., Feb.15,1912; p. 118; 600 w*; 25c.

———. *Placer Mining in Quebec.*—Mines & Minerals, Feb.,1912; p. 422; 1000 w*; 35c.

———. *Porcupine vs. Goldfield;* [Compares development of companies].—Industrial Advocate, Feb.,1912; p. 9; 3000 w; 45c.

———. *The Con. Ophir Mines, Ltd., Lake of the Woods, Ont.*—Canadian Mng. Jnl., Feb.15,1912; p. 122; 2500 w; 25c.

———. *The Dome Mine, Porcupine.*—E. & M. J., Apr.13,1912; p. 731; 1200 w*; 25c.

———. *The Lucky Cross Mines, Swastika.*—Canadian Mng. Jnl., Jan.1,1912, p. 20; 1000 w*; 25c.

———. *Ymir Camp.*—See Br. Columbia.

MEXICO

Bayliss, R. T.—*Conditions at El Oro.*—E. & M. J., Jan.20,1912, p. 163; 1500 w; 25c.

Bonillas, Y. S.—*Algunos datos geologicos sobre el mineral "La Campana";* [Geologic notes on the "La Campana" mine, Altar district, Sonora].—Soc. Geol. Mex., Bol.; Vol. 7, No. 2; pp. 155-168*; $2.

Brady, A. C.—*Mexico,* 1911.—See Mexico.

Brady, A. C.—*Mining in Jalisco in* 1911.—E. & M. J., Jan.13,1912, p. 125; 1300 w; 25c.

Brady, A. C.—*Review of Mining in Foreign Countries in* 1911; *Mexico.*—Mining & Engg. World, Jan.27,1912; p. 249-258; 15,000 w; 25c.

Sonora, by J. I. Cohn; page 258; 4000 w; 25c.

Gonzalez, F., A. Grothe and L. Salazar.—*The Mining Industry of Mexico; No.* 2: *State of Hidalgo, Part* 2.—Mexico City, 1911; 108 pp.*; $1.50.

Hafer, C.—*The Mines of the Sonora Valley, Sonora, Mex.*—Mining & Engg. World, Apr.27,1912; p. 903; 2200 w*; 10c. Reprint in Los Angeles Mng. Rev., May4, p. 5; 20c.

Lakes, H.—*Prospecting Conditions Found in Portions of Sonora;* [West coast gold and silver belts].—Mining & Engg. World, Jan.13,1912; p. 110; 1500 w; 10c.

MacCoy, F.—*El Oro District in* 1911.—E. & M. J., Jan.6,1912, p. 81; 400 w; 25c.

Rangel, M.—*Mineral Resources Durango;* [in Spanish].—See under Mexico (Durango).

Roldán, L. V.—*Estudio geologico y minero de la sierra de El Oro;* [Geology of the ore deposits of the El Oro range, Durango].—Soc. Geol. Mex., Bol.; Vol. 7, No. 2; 1911; pp. 125-134; $2.

Scaife, H. L.—*Zacualpan;* [The ancient gold-silver mines of the Zacualpan district, state of Mexico].—Mex. Inst. Mng. & Met'gy, Trans. Vol. 2, No. 5; p. 164; 1500 w; 65c.

Sheldon, G.—*Alamos District.*—See Sonora.

Sheldon, G. L.—*The Mocorito District in Sinaloa;* [Silver-gold].—E. & M. J., Junel, 1912; p. 1092; 700 w; 25c.

Sheldon, G. L.—*The Sinaloa Mining District, Sinaloa, Mex.*—M. & S. P., Dec.23, 1911, p. 803; 1000 w*; 20c.

———. *Industries in the Territory of Tepic.*—El Paso Mng. Jnl., Apr.,1912; p. 20; 3000 w; 35c.

———. *Mines in Northern Sinaloa.*—M. & S. P., Apr.27,1912; p. 591; 500 w*; 25c.

———. *Oaxaca in* 1911.—E. & M. J., Jan. 6,1912; p. 79; 1000 w; 25c.

———. *Review of Mexican Output,* 1911.—Mex. Mng. Jnl., Jan.,1912; p. 15; 2100 w; 35c.

———. *The Sinaloa Mining District.*—El Paso Mng. Jnl., Apr.,1912; p. 23; 1200 w; 35c.

———. *Work of the Amparo Mining Co.;* [Silver-gold; Jalisco, Mex.; abstract of report for 1911].—M. & S. P., June 8, 1912; p. 793; 1000 w; tables; 20c.

CENTRAL AND SOUTH AMERICA; WEST INDIES

Akin, A. D.—*Mineral Resources of Honduras.*—Mining & Engg. World, Apr.20, 1912; p. 865; 3200 w; 10c.

Baragwanath, J. G.—*Notes on the Geology of the Zaruma Mines, Ecuador* [Gold].—Columbia School of Mines Quar'ly; Jan., 1912; p. 160; 1500 w*; 65c. Abstract in Mng. Sci., May2, p. 389; 1500 w*; 20c.

Carter, T. L.—*Nicaragua and its Possibilities;* [Brief summary].—M. & S. P., March23,1912; p. 443; 500 w; 20c.

Carter, T. L.—*Central American Mines in* 1911; [Nicaragua, Honduras, Guatemala; chiefly gold-silver].—M. & S. P., Jan.6,1912, p. 60; 2000 w; 35c.

Carter, T. L.—*Nicaragua in* 1911.—E. & M. J., Jan.6,1912, p. 81; 750 w; 25c.

Haeberle, A. T.—*An Undeveloped Section of Honduras;* [Olancho dept.].—U. S. Consul. Rep., March28,1912; p. 1249; 3000 w; 20c.

Haeberle, A. T.—*Mines and Minerals of Honduras.*—U. S. Consul. Rep., March22, 1912; p. 1171; 2000 w; 20c. Abstract in Los Angeles Mng. Rev., Apr.6, p. 14; 2000 w; 20c. Also in Mex. Mng. Jnl., June,1912; p. 31; 2500 w; 25c.

Haeberle, A. T.—*A Visit to the Department of Olancho, Honduras.*—Pan-Amer. Union, Bull., May,1912; p. 588-606*; 35c.

Henderson, W.—*Gold Discoveries in Venezuela.*—U. S. Consul. Rep., May25, 1912; p. 790; 600 w; 20c.

Hershey, O. H.—*Geology of the Pis Pis*

Mining District in Nicaragua.—M. & S. P., Feb.17,1912; p. 270; 3500 w*; 20c.

Johnson, R. D. O.—*Flume Construction in Colombia.*—E. & M. J., March30,1912; p. 649; 1600 w*; 25c.

Kaeding, H. B.—*Eastern Nicaragua from the Mine Owner's Viewpoint.*—Mex. Mng. Jnl., March,1912, p. 19; 3600 w*; 25c.

Kaeding, H. B.—*Treatment of Nicaraguan Gold Ores;* [Costs in Pis Pis district]. —Amer. Inst. Mng. Engrs., Bull. 60, Dec., 1911, p. 1029; 1800 w; $1.15. Abstract in Mng. Sci., Feb.1,1912, p. 126; 1800 w; 20c.

Nicholson.—*Cuba as a Mining Country.*—See under Copper.

Percival, G. B.—*Prospecting for Gold in the Jungles of Surinam.*—Mining & Engg. World, March9,1912; p. 555; 1500 w*; 10c.

Pryor, T.—*Makeshifts in Mining;* [Gold mines near Popoyan, Colombia].—Mng. Mag., March,1912; p. 204; 1000 w*; 35c.

Sanjines, C.—*Mineral Resources of Bolivia;* [Chiefly gold and tin districts and mining regulations].—M. & S. P., March9, 1912, p. 376; 2200 w*; 20c.

Shaw, S. F.—*Mine Sampling;* [System at Montezuma gold mines, Costa Rica].—Mng. Mag., Dec.,1911, p. 457; 1000 w*; 35c.

Vatin, J. and G. Barrie.—*The Gold Mining District of Milla-Michi-Có and Malal Caballo, Neuquén, Argentina;* [Abstract from Anales del Ministerio de Agric (Geologia), Vol. 5, No. 4; 85 pp*; 1911].—Mng. Jnl.; Feb.17,1912; p. 177; 2500 w; 35c.

Verloop, J. H.—*The Surinam Gold Industry.*—Amsterdam, 1911; 106 pp*; (book).

Woodward, H. P.—*The Nemesis Mine and Kohinoor South;* [Murchison goldfield, W. Australia].—W. A. Mng. etc. Jnl., Dec.16, 1911, p. 12, p. 13; 2100 w; 35c.

Commissioner of Lands & Mines.—*Gold and Diamond Industries of British Guiana.* —Georgetown, B. G.; 1911; 15 pp.; 75c.

———. *Aporoma Goldfields Co., Ltd.;* [Peruvian placer fields].—Mng. World (London), Apr.13,1912; p. 459; 1500 w; 35c.

———. *Central American Operations;* [Review of 1911 in Salvador, Costa Rica, Honduras, Panama].—E. & M. J., Jan.6, 1912, p. 82; 1000 w; 25c.

———. *Colombia in* 1911; [Gold fields]. —Mng. Jnl., Jan.6,1912, p. 26; 1000 w; 35c.

———. *Conditions Governing Gold Placer Mining in Bolivia.*—Mining & Engg. World, June8,1912; p. 1200; 1100 w; 10c.

———. —*Gold Mining in Tierra del Fuego.*—Australian Mng. Standd., Feb.15, 1912; p. 147; 1000 w; 35c.

———. *Putu Placers.*—M. & S. P., Feb. 17,1912; p. 273; 800 w*; 20c.

———. *S. America in* 1911.—E. & M. J., Jan.6,1912; p. 82; 2000 w; 25c.

———. *Venezuela of Today;* [Caratal or Nueva Providencia and other goldfields in Venezuelan Guiana].—Mng. Jnl., May18, 1912; p. 479; 2000 w*; 35c.

EUROPE

Flegel.—*Mining in Servia.*—See Copper.

Granigg, B., and M. Lazarevic.—*Zur Systematik der Lagerstätte "Schneeberg" in Tirol;* [Controversy on composition and mineralization of the Schneeberg auriferous ore body in the Tirol].—Zts. f. prakt. Geol., April,1912; p. 164; 3000 w; $1.

Labéy, Léon.—*L'or en Limousin; les exploitations gallo-romaines et les travaux de recherches en cours d'exécution;* [The gold mining industry in Limousine, France, in Gallo-Roman times and at the present day]. Soc. Amicale...Mineurs de Douai, Bull., Nov.25,1911, p. 762; Dec.10, p. 778; 4500 w; 50c.

Schumacher, F.—*Die Golderzlagerstätten und der Goldbergbau der Rudaer Zwölf-Apostel-Gewerkschaft zu Brád in Siebenbürgen;* [The gold ore deposits and lignites of the Ruda Zwölf-Apostel Co., Brad, Transylvania].—Berlin, 1912; 114 pp; 6 plates; 80 figs; $2 (book).

Abstract in Zts. f. prakt. Geol., Jan.-Feb.,1912; pp. 1-85*; 75c. Abstract on gold mining history and practice.—Bergwirtsch. Mittlngn., Jan.-Feb.,1912; pp. 1-11; 75c.

Suchy, G.—*Die Erzlagrstätte von Altenberg in Schlesien nebst einer Uebersicht über das Bober-Katzbach-Gebirge;* [The ore deposits (gold-silver) of Altenberg, Silesia, and a review of the Bober-Katzbach range].—Kohle & Erz, May13,1912; p. 506; May20, p. 530; 6000 w; 50c.

ASIA (INCLUDING RUSSIA)

Adams, G. I. and W. E. Pratt.—*Geologic Reconnaissance of Southern Luzon.*—Philipp. Jnl. of Sci., Dec.,1911; pp. 449-482*; 65c.

Bain.—*Japan Mineral Production.*—See Japan.

Brown, J. C.—*Some Factors Governing the Accurate Valuation and Successful Exploitation of Gold-Bearing Alluvials in India.*—Mng. & Geol. Inst. of India; Trans.; Jan.,1912; pp. 209-212; $2.50.

Abstract in Mng. Jnl., May4, p. 452; 500 w; 35c. Also in Mining & Engg. World, May25, p. 1100; 1000 w; 10c.

Carter, H. A.—*Gold Mines of Mysore.*—M. & S. P., Feb.3,1912; p. 201; 700 w*; 20c.

Eddingfield, F. T.—*Aroroy Mineral District;* [quartz veins, Masbate I'd.].—Mineral Resources of the Philippines, 1911; p. 10-13; 2000 w*; 65c.

Eddingfield, F. T.—*Pangasinan Placer.*—Mineral Resources of Philipp. I'ds, 1911, p. 32; 350 w; 65c.

Eddingfield, F. T.—*Other Mineral Districts;* [Review of gold mining in 1910 in Mancayan-Suyoc, Benguet (Lubang), Nueva Ecija, Marinduque, Mindoro, Samar, Mindanao].—Mineral Resources of Philipp. I'ds, 1911; p. 33; 1000 w; 65c.

Eye, C. M.—*Is "Cheap" Labor Economical?* [Discusses gold mining and milling in Philippines].—M. & S. P., March30,1912; p. 476; 1500 w; 20c.

Fanning, Paul R.—*Paracale-Mambulao Mining District;* [Progress in gold dredging and quartz mining in 1910].—Minrl. Resources of Philippines, 1911; p. 18; 5000 w; 65c.

Ferguson, H. G.—*The Geology and Mineral Resources of the Aroroy District, Masbate.*—Philipp. Jnl. of Sci., Oct.,1911; pp. 397-426*; 65c. Abstract in Mining & Engg. World, Aug.3, p. 199; 2700 w; 10c.

Hanlon, R. Y.—*Philippine Placers;* [Reviews dredging and gravel resources].—Mineral Resources of Philipp. I'ds, 1911; p. 69; 2000 w; 65c.

Hansen, C. C.—*Gold and Precious Stone Mining and Jewelry in Siam;* [Sapphires and rubies].—U. S. Consul. Rep., Apr.23, 1912; p. 320; 500 w; 20c. Reprint in Mining & Engg. World, June15, p. 1246; 10c.

de Hautpick, E.—*Russia;* [Gold and Manganese in the Caucausus; Quicksilver in the Urals].—Mng. Jnl., May18,1912; p. 481; 2500 w; 35c.

Hutchins.—*Russian Empire in* 1911.—See under Asia (Russia-in-Asia).

Huntington, E.—*Gold Workings in Central Asia;* [Primitive practice in Ladakh and Karatash valley districts, west China].—M. & S. P., Apr.27,1912; p. 600; 1000 w; 20c.

Knox, W. M.—*Gold Mining in Formosa.*—M. & S. P., March23,1912; p. 435; 1600 w; 20c.

Martin, J. J.—*Prospecting Gold Placers in Korea.*—M. & S. P., May18,1912; p. 690; 2000 w*; 20c.

Park, H.—*Gold in East Luzon;* [Dredging field on Umeari river].—Australian Mng. Standd., March7,1912; p. 214; 500 w; 35c.

Perret, L.—*Gold and Platinum Alluvial Deposits in Russia;* [Methods of prospecting and working].—See Russia-in-Asia, in Chapter 2.

Pratt, W. E.—*The Nalasvetan, Ambos Camarines, Gold District;* [Review of progress in 1910].—Minrl. Resources of Philippines, 1911; p. 26; 1000 w; 65c.

Pratt, W. E.—*Notes on the Mineral Resources of Catanduanes Island, P. I.*—Mineral Resources of Philippines, 1911; p. 28; 1500 w; 65c.

Purington, C. W.—*Winter Gold Mining in Siberia;* [Working of frozen gravels].—Mng. Mag., Jan.,1912, p. 50; 2800 w*; 45c.

Read, T. T.—*Mineral Production and Resources of China.*—See under China.

Reat, S. C.—*The Gold Mines of Formosa.*—U. S. Consul. Rep., Apr.29,1912; p. 396; 600 w; 20c. Reprint in Mining & Engg. World, June8, p. 1194; 10c.

Smith, W. D.—*Developments in the Baguio District.*—Mineral Resources of the Philippines, 1911; p. 13; 1500 w*; 65c.

Smith, W. D.—*Geological Reconnaissance of Mindanao and Sulu: III, General Geology and Economic Geology.*—Philipp. Jnl. of Sci., Oct.,1911; pp. 359-396*; 65c.

Smith, W. D. and F. T. Eddingfield.—*Additional Notes on the Economic Geology of the Baguio Mineral District.*—Philipp. Jnl. of Sci., Dec.,1911, pp. 429-448*; 65c.

Weatherbee, D'Arcy.—*Labor Conditions on the Lower Amur;* [Kolchan gold-dredging area].—Mng. Mag., March,1912; p. 197; 1500 w*; 35c.

———. *Goldfields of Mysore;* [Review for 1911].—Mng. World (London), March9, 1912; p. 296; p. 298; 2000 w; 35c.

———. *India's New Mining Field; Anantapur.*—Mng. World (London), March2, 1912; p. 266; 1000 w; 35c.

———. *Primorsk Prospects, Siberia.*—Mng. Jnl., Feb.3,1912; p. 111; 1200 w; 35c.

———. *Review of Mining in* 1911; *Siberia.*—Mining & Engg. World, Jan.27,1912; p. 275; 1200 w; 25c.

———. *Russian Gold Production in* 1911.—M. & S. P., Feb.24,1912; p. 313; 1000 w; 20c.

———. *Russia;* [Review for 1911].—Mng. Jnl., Jan.20,1912; p. 68; 1000 w; 35c.

———. *The Mines of Mysore;* [Abstract of report of Geol. Dept. and Chief Inspector of Mines for 1910].—Mng. World (London), June8,1912; p. 735; 2000 w; 35c.

———. *Western Siberian Gold Situation: Vitim Gold District.*—Mng. Jnl., Jan.27, 1912; p. 101;; 1500 w; 35c.

SOUTH AFRICA

See also Transvaal, Chapter 2.

Davey, W. H.—*Rhodesian Mining Industry in* 1911.—Afr. World, Dec.20,1911; p. 427-444*; $1.50.

Davey, W. H.—*Rhodesian Copper; Shamva and Susanna Gold Mines.*—Afr. World, June8,1912; p. 261; 1500 w; 35c.

Frost, A. W. H.—*Mines of the Pilgrims Rest Gold Fields;* 1: *Mali Dyke.*—S. Afr. Mng. Jnl., Apr.13,1912; p. 247; 1000 w; 35c.

Gascoyne, R.—*World's Biggest Gold Producer on the Rand;* [Randfontein Central equipment].—Mining & Engg. World, Apr.6, 1912; p. 759; 1500 w*; 10c.

Gascoyne, R.—*Review of Mining in Foreign Countries in* 1911; *South Africa.*—Mining & Engg. World, Jan.27,1912; p. 270; 7000 w; 25c.

Gascoyne, R.—*Transvaal Gold Mining;* [Operating conditions and mining practice in 1911].—M. & S. P., Jan.6.1912, p. 63; 3200 w*; 35c. Reprinted in W. Australian Mng., etc., Jnl., March2, p. 12; 35c.

Horwood, C. B.—*The Geology of the Rand;* [Read to Geol. Soc. of S. Afr.; discusses Mellor's paper].—S. Afr. Mng. Jnl., Feb.17,1912; p. 867; 3000 w; 35c.

Key, A. Cooper.—*The Witwatersrand Gold Fields in* 1911.—Afr. World Annual, Dec.,1911; pp. 325-426*; $1.50.

Key, A. Cooper.—*Two Decades of the Rand; Production and Dividends.*—Mining & Engg. World, March16,1912; p. 599; 1500 w*; 10c.

Laur, F.—*La fin normale d'une mine d'or;* [The exhaustion of gold mines].—Echo d. Mines, Feb.29,1912; p. 259; 1000 w; 35c.

Letcher, O.—*Duration of Future Profitable Working of Rand Mines.*—Mining & Engg. World, Feb.17,1912; p. 396; 1000 w; 10c.

Letcher, O.—*The Outlying Gold Mines of the Transvaal.*—Mining & Engg. World, Jan.13,1912; p. 69; 1800 w; 10c.

Letcher, O.—*Mining Methods and Tendencies on the Rand.*—Mining & Engg. World, June8,1912; p. 1199; 2100 w; 10c.

Marriott.—*Rhodesia,* 1911.—See Rhodesia.

Marriott, H. F.—*Mining in the Transvaal in* 1911.—E. & M. J., Jan.6,1912, p. 84; 3000 w; 25c.

Mellor, E. T.—*Geology of the Witwatersrand.*—See under Transvaal.

Rhodesia Chamber of Mines.—*Tables of Monthly Output.*—See under Rhodesia.

Saner, Chas. B.—*Presidential Address;* [Chiefly on progress in mining practice].—Chem. Met. & Mng. Soc. of S. Afr., Jnl.; Feb.,1912; p. 314; 4500 w; 90c.

Steele, H.—*Cost of Mining a Ton of Ore;* [at large low-cost copper, gold and diamond mines].—E. & M. J., May25,1912; p. 1023; 1600 w; 25c.

Stokes, R.—*The Witwatersrand and Its Mines.*—See W. A. Caldecott (Editor) under Transvaal.

Swinburne, U.—*Natal,* 1911.—See Natal.

Webber, H. O'K.—*The Outlook for Rand Mining;* [Presidential address Transvaal Chamber of Mines].—S. Afr. Mng. Jnl., March2,1912; p. 935; 1500 w; 35c.

———. *Deepest Workings of the Central Rand.*—S. Afr. Mng. Jnl., Feb.24,1912; p. 897; 1500 w; 35c.

———. *Developments on the Murchison Range;* [Leydsdorp district, Transvaal].—S. Afr. Mng. Jnl., May4,1912; p. 349; 750 w*; 35c.

———. *Geology of the Witwatersrand;*

[Discussion of J. S. Olver's work].—S. Afr. Mng. Jnl., Dec.16,1911, p. 520, p. 528; Dec. 23, p. 560; 3000 w; 35c.

———. *Mines of the Witwatersrand;* [Series of articles describing individual mines and mills, published in S. Afr. Mng. Jnl.].—See under Transvaal.

———. *Rand Mining as an Investment.*—S. Afr. Mng. Jnl., Feb.17,1912; p. 859; 1500 w; 35c.

———. *Recent Progress at Pigg's Peak.*—S. Afr. Mng. Jnl., Dec.9,1911, p. 483; 1900 w*; 35c.

———. *Rhodesia;* [Present status of conditions and review for 1911].—Mng. Jnl., June1,1912; p. 529; 2000 w; 35c.

———. *Rhodesian Working Costs;* [From London Financial Times].—Canadian Mng. Jnl., Jan.1,1912, p. 19; 1400 w; 25c.

———. *Rhodesia in* 1911.—Mng. Jnl., Jan. 6,1912, p. 9; 1000 w; 35c.

———. *South Africa and the World's Gold Output.*—S. Afr. Mng. Jnl., Feb.17, 1912; p. 856; 1000 w; 35c.

———. *The Geology of the Witwatersrand;* [Reviews recent controversial questions].—S. Afr. Mng. Jnl., Dec.2,1911, p. 441; 2000 w*; 35c.

———. *The Rand's Ore Reserves.*—S. Afr. Mng. Jnl., April13,1912; p. 237; 1500 w; 35c. Also in Afr. World, May11, p. 18; 1500 w; 35c. Also in M. & S. P., June15, p. 833; 1000 w; tables; 20c.

———. *The Transvaal in* 1911.—Mng. Jnl., Jan.6,1912, p. 8; 1200 w; 35c.

———. *The Venterskroon Gold Field;* [Discusses failure].—S. Afr. Mng. Jnl., Feb. 3,1912; p. 786; 600 w; 35c.

REST OF AFRICA

Draper, T.—*Mining in Madagascar;* [Outlines physical conditions of country].—Mng. Mag., Dec.,1911, p. 439; 2800 w*; 35c.

Foster, D. F.—*Labor and Superintendence on the Gold Coast.*—M. & S. P., Feb. 3,1912; 2000 w*; 20c.

Ball.—*Belgian Congo,* 1911.—See Congo.

Lacroix, A.—*Les recherches minières de Madagascar;* [Mineral resources of Madagascar].—Echo d. Mines, Apr.15,1912; p. 456; 1200 w; 35c. Reprint in Soc. Amicale d. Mineurs de Douai, Bull., Apr.25, p. 237; 1200 w; 35c.

Levat, D.—*Guide pratique du prospecteur à Madagascar;* [Practical guide for the prospector in Madagascar].—Paris, 1912; 132 pp; 38 figs; map; $2.50 (book).

Merle, A.—*Explorations minières dans le centre et l'ouest de Madagascar;* [Mining explorations in the center and west of Madagascar].—Paris, 1912; 158 pp*; $2.50; (book).

Turner, J. R. F.—*The Jungle Mines in* 1911; [Review of West African gold mining].—Afr. World Annual, Dec.,1911, pp. 207-215*; $1.50.

Watson.—*L'or en Guinée;* [Gold placers in Upper French Guinea].—Echo d. Mines, Apr.25,1912; p. 508; 500 w; 35c.

Yerby, W. J.—*Commerce of the Gold Coast Colony;* [Includes gold production, 1910].—U. S. Consul. Rep., Jan.24,1912, p. 392; 800 w; 20c.

———. *Future of Madagascar.*—Mining & Engg. World, Dec.16,1911, p. 1221; 1000 w; 10c.

———. *L'or à la côte d'Ivoire;* [Review of gold mining on the Ivory Coast].—Echo d. Mines, Jan.15,1912; p. 60; 750 w; 35c.

———. *Mineral Prospects in East Central Africa* [British E. African Protectorate].—S. Afr. Mng. Jnl., Nov.18,1911, p. 368; 1800 w; 35c.

———. *Production and Treatment of Gold, Gold Coast Colony;* [1910; from U. S. consular report].—Mining & Engg. World, May25,1912; p. 1088; 300 w; 10c.

———. *The Gold Coast;* [Review for 1910].—Mng. Jnl., Dec.16,1911, p. 1213; 1500 w; 35c.

———. *The Gold Coast Mines, West Africa.*—Mng. & Engg. Rev., Sept.,1911, p. 480; Nov., p. 71; Dec., p. —; 8000 w*; 65c.

Abstract of part 1 in Mng. & Sc. Press, Nov.18,1911, p. 653; 1500 w*; 20c.

———. *The Zambesia Mineral Areas·* [Routes and conditions in Tete copper-gold area; from Mozambique Jnl.].—S. Afr. Mng. Jnl., March30,1912; p. 147; 1200 w; 35c.

AUSTRALASIA

Allen, A. W.—*Possibilities of British Papua.*—M. & S. P., Apr.27,1912; p. 588; 2000 w*; 20c.

von Bernewitz, M. W.—*Coolgardie and Ora Banda.*—W. Australian Mng., etc., Jnl., Nov.11,1911, p. 6; 1000 w; 35c.

Bradford, Wm.—*The Ararat Valley, Victoria.*—Mng. & Engg. Rev., Apr.3,1912; p. 285; 3600 w*; 35c.

Brown, F. C.—*New Zealand and Nevada Mining Methods Compared;* [Compares wages, labor conditions and details of mining and milling].—M. & S. P., Jan.13,1912, p. 104; 1800 w; 20c.

Burns, A. W.—*Charters Towers, Queensl., Mining in* 1911; [Statistics of gold and copper output].—Australian Mng. tSandd., Feb. 29,1912; p. 195; 1000 w; 35c.

Clark, D.—*Australian Mining and Metallurgy.*—Melbourne, 1911; 600 pp.*; $6.50 (book).

Farquharson, R. A.—*Observations on Some Rocks from the Ingliston Extended Mine, Meekatharra, Murchison Goldfield.*—W. Australian Mng., etc., Jnl., March16, 1912; p. 12; March23, p. 12; 5500 w; 50c.

Greenfield, W. H.—*Map of the Croydon and Etheridge Goldfields, Queensland.*—Queensl. Geol. Surv., Publ. No. 230; 1911.

Greenfield, W. H.—*Map of the Cape York Peninsula Gold and Mineral Fields, Queensland.*—Queensl. Geol. Survey, Publ. No. 233; 1911.

Jarman, A.—*Mining Ore at the Talisman Mine, N. Z.;* [Geology, mining and handling methods; read to Australasian Inst. of Mng. Engrs.; abstract].—Mines & Minerals, Feb.,1912; p. 443; 4800 w*; 35c.

Larcombe, C. O. G.—*Notes on the Geology of Kalgoorlie.* — Australasian Inst. Mng. Engrs., Memoirs; 1911; 308 pp*.

Review in Australian Mng. Standd., Jan. 18,1912; p. 49; Jan.25, p. 75; 4000 w; 50c.

Mance.—*Australasia,* 1911.—See Australia.

MacDonald, A. R.—*Queensland Mining,* 1911. See Queensland.

Marks, E. O.—*Some "Outside" Charters Towers Mines.*—Queensl. Govt. Mng. Jnl., April,1912; p. 148; 3000 w*; 35c.

Meudell, W. G.—*Gold Mining in Victoria;* [Census of companies in operation and promoted, yearly, 1901-1911].—Vict. Chamber of Mines, Jnl.; Feb.,1912; p. 126; 500 w; 35c.

Morgan, P. G.—*The Geology of the Greymouth Subdivision, North Westland, N. Z.*

—N. Z. Geol. Survey., Bull. 13, 1912; 159 pp*; $1.50.

Pabst, V.—*North Nuggety Ajax Mine, Daylesford, V.*—Australian Mng. Standd., May2,1912; p. 402; 2000 w; 35c.

Pabst, V.—*New Specimen Hill, Daylesford, Victoria.*—Australian Mng. Standd., Nov.23, 1911, p. 515; 1100 w; 35c.

Pittman.—*Gold and Tin Dredging and Mining, N. S. W.*, 1911.—See under Tin.

Reed, F. A.—*A Submerged Flexible-Joint Main;* [Carrying a placer-mining conduit under the rapid Taramakau river, N. Z.].—Instn. of Mng. & Met'l'gy, Bull. 88, Jan., 1912; p. 1-9*; 50c. Abstract in Engg. News, Apr.4,1912; p. 641; 1000 w; 25c.

Richard, L. M.—*Gold-Bearing Conglomerates of Big Horn Mountains, Wyoming.*—Mining & Engg. World, March9,1912; p. 556; 700 w; 10c.

Sharpley, H.—*The Blackwater Mine;* [Gold mining and milling on South I'd. N. Z.].—Mng. Mag., Dec.,1911, p. 448; 800 w; 35c.

Stone, S. R.—*The Conservation of Water for Hydraulic Sluicing;* [Instances of impounding small streams in Queensland placer districts].—Mining & Engg. World, June1,1912; p. 1135; 2500 w*; 10c.

Talbot, H. W. B.—*Preliminary Report on the Country North of Lake Giles, W. Australia.*—W. A. Mng. etc. Jnl., Nov.4,1911, p. 7; 2500 w; 35c.

Williams, G. W.—*Distribution of Gold in Australia; A Review and a Forecast.*—Australian Mng. Standd., Nov.23,1911, p. 521; Nov.30, p. 547; Dec.7, p. 571; 9200 w; 75c.

W. A. Chamber of Mines.—*W. A. in* 1911.—W. Australia Chamber of Mines, Jnl.; Jan.,1912; pp. 345-349; 4000 w; 90c. Reprint in London Mng. Jnl., Apr.6, p. 322; 35c.

———. *Australian Gold Output;* [Discusses continued decline].—Australian Mng. Standd., Feb.29,1912; p. 185; 800 w; 35c.

———. *Australasian Mining in* 1911.—M. & S. P., Jan.6,1912, p. 56; 2400 w*; 35c.

———. *Map of the Goldfields in the Vicinity of Charters Towers, Queensland.*—Queensl. Geol. Surv., Publ. No. 236; 1911.

———. *Mining in* 1911; [Review for Western Australia].—W. A. Mng., etc., Jnl., Jan.6,1912; p. 10; 2200 w; 35c.

———. *New Zealand Mining;* [Abstract of official report for 1910; coal, gold].—Mng. Jnl., Apr.6,1912; p. 321; 1600 w; 35c. Also in Indian & Eastern Engr., Apr., p. 121; 1000 w; table; 35c.

———. *Northern Territory in* 1911.—See under Australia.

———. *Papuan Mining;* [Gold and copper output, 1911; from territorial report].—Mng. & Engg. Rev., April,1912; p. 289; 500 w; 35c.

———. *South Australia, July-Dec.,* 1911.—Mng. Jnl., May4,1912; p. 426; 35c.

———. *Western Australia in* 1911—Mng. Jnl., Jan.6,1912, p. 10; 4000 w; 35c.

DREDGING; SLUICING; HYDRAULICKING

See under "Mine and Mining" Technology.

Milling; Metallurgy

ORE AND GRAVEL DRESSING

For additional papers on crushing, grinding and concentration, see Chapter 10, "Mill and Milling."

Allen, A. W.—*The Estimation of Battery Tonnage.*—M. & S. P., Feb.24,1912; p. 308; 2000 w; 20c.

Allen, A. W.—*Pebble Efficiency in Tube Milling.*—M. & S. P., Jan.6,1912, p. 19; 1000 w; 35c.

Ball, H. S.—*The Economics of Tube Milling.*—Instn. of Mng. & Met'l'gy, Bull. 83; Aug.,1911, pp. 12-58. Discussion in Bull. 86, Nov., pp. 3-14; Bull. 87, pp. 33-50; 75c.

Abstract of paper in M. & S. P., Sept.23, p. 383; 3500 w; 20c. Also in S. Afr. Mng. Jnl., Sept.23, p. 76; Oct.7; Oct.14, p. 186; Oct.21, p. 229; Oct.28, p. 259; 10,000 w; 95c. Also in Mng. Sci., Oct.5, p. 313; 650 w; 20c. Also in S. Afr. Engg., Oct., p. 64, 68; 2500 w*; 35c.

von Bernewitz, M. W.—*Ball-Mill Practice;* [Notes on various phases].—Mng. Mag, Jan.,1912, p. 59; 300 w; 45c.

Brown, F. C.—*Tube Mill Practice and Liners.*—M. & S. P., Feb.3,1912; p. 206; 1800 w*; 20c. Abstract in Mining & Engg. World, March23, p. 665; 1200 w*; 10c.

Browne, R. S.—*Progress in Cyano-Metallurgy in* 1911; [I: Crushing and grinding; II: Agitation, precipitation, filtration].—Mining & Engg. World, Feb.3,1912; p. 287; Feb.10, p. 348; 8000 w; 20c.

Burroughs, W. G.—*Dry-Placer Mining Methods;* [Separating devices and geology of various deposits].—Mines & Minerals, March,1912, p. 486; 2400 w*; 35c.

Del Mar, Alg.—*A Treatise on Practical Stamp Milling and Stamp Mill Construction.*—New York; 1911; 134 pp.; 98 figs.; $2; (book).

Denny, G. A.—*Concentration vs. Cyanidation.*—Mng. Mag., April,1912; p. 293; 2700 w; 45c.

Dowling, W. R.—*Tube Milling.*—See Caldecott's "Rand Metallurgic Practice," under Transvaal.

Abstract in S. Afr. Mng. Jnl., May11, 1912; p. 385; 1500 w; 35c.

Eddy, L. H.—*Cross System Gold Saving Tables;* [on Oroville dredges, California].—E. & M. J., Feb.24,1912; p. 396; 1000 w*; 25c.

Empson, J. B.—*The Slow-Speed Chilean Mill as Applied to Mexican Practice.*—Mex. Instn. of Mng. & Met'l'gy, Trans., Vol. 2, No. 6, pp. 172-204*; $1 (Duplicated in Spanish and in English).

Abstract in E. & M. J., Feb.3, p. 259; 4800 w*; 25c. Also in Mining & Engg. World, March23, p. 649; 3600 w*; 10c. Also in Met. & Chemi. Engg., April1, p. 244; 1800 w; 35c. Also in Engg. Mag., April, p. 109; 1000 w; 35c.

Spanish abstract in Mex. Mng. Jnl., June, p. 59; 2000 w; 25c.

Fuller, J. P.—*Reinforced Concrete for Stamp Foundations.*—Mng. Mag., Apr., 1912; p. 278; 1000 w*; 45c.

Gascoyne, R.—*A Modern Reduction Plant on the Witwatersrand;* [Modder B mill].—Mining & Engg. World, May4,1912; p. 953; 1600 w*; 10c.

Haley, C. S.—*Elevating 10-ct. Gravel at a Profit;* [Elevator system of hydraulic gold mining in California and Oregon].—M. & S. P., Apr.13,1912; p. 530; 3600 w*; 20c.

Hanson, H.—*Development of Fine Grinding in Connection with Gold Ore Treatment;* [Read to Canadn. Mng. Inst., Porcupine branch].—Canadian Mng. Jnl., March

1,1912, p. 166; 1200 w; 25c. Also in Mex. Mng. Jnl., Apr.,1912; p. 18; 1200 w; 25c.

Hamilton, E. M.—*Cyaniding of Concentrate;* [Data from Mexican mills treating gold-silver ores].—E. & M. J., Apr.27,1912; p. 839; 5000 w; 25c.

Harris, A. H.—*Saving the Gold in Beach Sand;* [Scraper and concentrator for use in Oregon].—M. & S. P., March20,1912; p. 505; 500 w*; 20c.

Hazard, F. H.—*A New Design for Undercurrent Grizzly;* [In northern California hydraulic mines].—E. & M. J., Jan.27, 1912, p. 207; 1500 w*; 25c.

Huntoon, L. D.—*Stamp Milling in* 1911.—E. & M. J., Jan.6,1912, p. 52; 2200 w; 25c.

Killik, F. A.—*Notes on a Simple Method of Separating Rock from Stiff Clays;* [at Totok gold mines, Celebes].—Instn. of Mng. & Met'l'gy, Bull. 87; Dec.,1911, p. 1-7*; 1600 w*; (Discussion), Bull. 88; Jan., 1912, p. 11-12; 500 w; 75c.

Abstract of paper in Mining & Engg. World, Jan.13,1912, p. 61; 1600 w*; 10c. Also in Mng. Sci., Jan.18, p. 47; 1600 w*; 20c. Also in E. & M. J., Feb.10, p. 304; 1600 w*; 25c. Also in Mines & Methods, Feb., p. 419; 1500 w*; 25c.

Also in German in Erzbergbau, March 15, p. 82; 1000 w*; 35c.

Lamb, M. R.—*Crushing Machines for Cyanide Plants;* [Read to Amer. Inst. Mng. Engrs.].—Queensl. Govt. Mng. Jnl., May, 1912; p. 211; 1800 w; 35c. Also in S. Afr. Mng. Jnl., June22, p. 621; 1900 w; 35c.

Loggin, N. A.—*Notes on Placer Mining With Special Reference to Hydraulic Sluicing;* [Read to Instn. of Mng. & Met'l'gy; abstract].—Mines & Minerals, March,1912, p. 507; 7500 w*; 35c.

Malcolmson, J. W. and L. R. Budrow.—*Preliminary Handling of Ore at El Tigre.*—M. & S. P., March16,1912, p. 398; 1000 w*; 20c.

Martin, Al. H.—*Rotary Tray Concentration;* [Darrow-Hambric tables superceding canvas tables on California gold ores].—Mines & Minerals, Feb.,1912; p. 428; 1000 w*; 35c. Abstract in Mining & Engg. World, March23, p. 668; 750 w*; 10c.

Martin, A. H.—*Heavy Stamps Find Favor at Nevada Mills.*—Mining & Engg. World, March30,1912; p. 703; 1800 w*; 10c.

Merrill, F. J. H.—*Dry Placers of Sonora.*—Los Angeles Mng. Rev., March2,1912; p. 7; 1200 w*; 20c.

McDermott, J.—*The Lane Mill; Report on Operations at Cue, W. Australia.*—W. A. Mng., etc., Jnl., Jan.13,1912; p. 12; 2500 w; 50c. Reprint in Los Angeles Mng. Rev., March23, p. 7; 20c. Also in Salt Lake Mng. Rev., March30, p. 19; 25c.

Nissen, P.—*Notes on High-Duty Gravity Stamp Mills;* [Tests of heavy Nissen stamps vs. intermediate-weight stamps at City Deep mill, Rand].—Cheml. Met. & Mng. Soc. of S. Afr., Jnl., Oct.,1911, pp. 111-124*; (Discussion and reply), Oct., p. 124-126; Nov., p. 182-187*; Dec., p. 225; Jan.,1912, p. 275-279*; March, pp. 357-365*; $3.75.

Abstract in Afr. World, Nov.4, p. 587; Nov.18, p. 76; 2000 w; 50c. Also in S. Afr. Mng. Jnl., Nov.4, p. 307; Dec.23, p. 572; 4200 w; 50. Also in E. & M. J., Dec.23, p. 1219; 1000 w; 25c. Also in Mining & Engg. World, Dec.30,1911, p. 1316; 1200 w; 10c.

Radford, W. H.—*Rocker for Washing Gravel.*—M. & S. P., June 8, 1912; p. 801; 150 w*; 20c.

Rollandet, G. J.—*Separation of Liquids from Ore Pulp;* [Caldecott patent].—Mng. Sci., Feb.29,1912; p. 210; 750 w*; 20c.

Schmitt, C. O.—*Future Economies in Rand Reduction Plants.*—Cheml. Met. & Mng. Soc. of S. Afr., Jnl., April,1911, p. 464; 6000 w*; 90c. Also in Instn. of Mng. & Met'l'gy, Bull. 80, May,1911; 59 pp*; 50c. Abstracts in S. Afr. Mng. Jnl., May 27,1911, p. 547; July 1, p. 739; 3200 w; 50c.

Discussion and Reply—C. M. & M. Soc., Jnl., May,1911, p. 563; 5500 w; July, p. 16; 10,000 w; $1.40. Also in I. of M. & M., Bull. 81, June,1911, p. 3; 13,000 w*; 50c; Bull. 88, Jan.,1912, pp. 23-37; 50c.

Skinner, L. B.—*A Critical Discussion of the Principles of the Richards Pulsator Classifier.*—Colo. Scient. Soc., Proc.; Apr., 1912; pp. 131-164*; 75c.

Extract on *Henderson Shaking Inclined-Screen Hydraulic Classifier.* — Met. & Cheml. Engg., June,1912; p. 343; 2700 w*; 35c.

Smart, G. O.—*Stamp-Milling.*—See Caldecott's "Rand Metallurgic Practice," under Transvaal.

Stadler, H.—*High-Duty Gravity Stamps;* [Discussion of Nissen's paper].—S. Afr. Mng. Jnl., Dec.2,1911, p. 457; 2000 w; 35c. Also in M. & S. P., Feb.17,1912, p. 274; 2000 w; 20c. Also in E. & M. J., Feb.17, p. 354; 1200 w; 25c. Also in Mining & Engg. World, March16, p. 614; 1800 w; 10c.

Thomas, J. E.—*Sorting and Breaking.*—See Caldecott's "Rand Metallurgic Practice," under Transvaal.

———. *Changes in the Design of Rand Stamps.*—E. & M. J., May25,1912; p. 1032; 300 w; 25c.

———. *Dust in Dry Crushing Plants;* [Reviews crushing and conveying practice at Kalgoorlie, W. A.].—Australian Mng. Standd., Nov.16,1911, p. 496; 1600 w; 35c.

———. *El molino tubular;* [The tube mill in gold metallurgy].—Mex. Mng. Jnl., March,1912, p. 57; 2200 w; 25c.

———. *Ore Valuation in Recovery Works;* [Problem of tonnages and extraction measurements].—S. Afr. Mng. Jnl., May4,1912; p. 353; 2000 w; 35c.

———. *Rand Table;* [Directory of companies, stamps and tube mill equipment, capital and dividends].—Mng. World (London), Feb.3,1912; p. 127; 1000 w; table; 35c.

———. *Reduction Plants of Nevada;* [List of, with capacity; from Goldfield "News"].—Salt Lake Mng. Rev., Jan.15, 1912, p. 27; 1000 w; tables; 25c. Also in Mining & Engg. World, Feb.17, p. 408; 500 w; table; 10c.

———. *Riffles for Saving Placer Gold;* [From California Mng. Bureau, Bull. 57].—Brit. Columbia Mng. & Engg. Record, Nov., 1911; p. 105; 500 w; 35c.

———. *The Caldecott Diaphragm Cone Classifier and Sand Filter Table.*—S. Afr. Mng. Jnl., Jan.27,1912; p. 740; 750 w; 35c.

———. *The Cons. Langlaagte New Plant;* [Crusher station; open-front mortar boxes].—S. Afr. Mng. Jnl., Apr.27,1912; p. 305; 400 w*; 35c.

———. *The Crown Mines' New Reduction Plant.*—S. Afr. Mng. Jnl., March16, 1912; p. 45; Apr.13, p. 233; 2000 w*; 50c.

———. *The Treatment of Tailings;* [Stanley Classifier tests on the Rand].—S. Afr. Mng. Jnl., Dec.16,1911, p. 526; 1400 w; 35c.

CYANIDING

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CHLORINATION

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AMALGAMATION

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Dowling, W. R.—*The Amalgamation of Gold in Banket Ore.*—Chem. Met. & Mng. Soc. of S. Afr., Jnl., March,1911, p. 414; 6000 w*; April, p. 499; May, p. 557; July, p. 30; Nov., p. 178; 7600 w; $3.75. Also in Instn. of Mng. & Met'l'gy, Bull. 79, April, 1911; Bull. 80, May, p. 9; Bull. 82, July, p. —; $1.10.

Abstract of paper in Mining World, May 27,1911, p. 1083; 4000 w*; 10c. Also in Mng. Sci., June1, p. 565; June8, p. 595; 6000 w*; 30c. Also in Pacific Miner, May, 1911, p. 12; 2500 w; 20c. Also in Canadian Mng. Jnl., June1, p. 345; 6000 w*; 25c. Also in Met. & Cheml. Engg., June, p. 322; 1500 w*; 35c. Also in M. & S. P., June 10, p. 785; 3300 w*; 20c. Also in W. Australian Mng., etc., Jnl., July22, p. 5; 3500 w; 50c. Also in S. Afr. Mng. Jnl., Sept.2, p. 1101; 2000 w; 35c.

Rollandet, G. J.—*Treating Refractory River Gravels by Amalgamation;* [T. J. Lovett process].—Mng. Sci., Feb.1,1912; p. 132; 1800 w*; 20c.

Stanley, C. H.—*Notes on the Absorption of Gold by Amalgamated Copper Plates, Cast Iron Retorts and Amalgan Trays.*—Cheml. Met. & Mng. Soc. S. Afr., Jnl.; Dec., 1911; pp. 218-223; 2500 w*; 90c. Also in Mining & Engg. World, Aug.3,1912; p. 188; 500 w; 10c.

———. *Amalgamation Tables for Huntington Mills.*—E. & M. J., June1,1912; p. 1078; 1000 w*; 25c.

———. *Alaska-Treadwell Amalgamation Tables.*—E. & M. J., Apr.27,1912; p. 835; 500 w*; 25c.

———. *Homestake Amalgamation Tables.*—E. & M. J., Apr.13,1912; p. 739; 500 w*; 25c.

GENERAL MILLING AND METALLURGY

Allen, A. W.—*The Statement of Working Costs* [In milling gold ores].—M. & S. P., Feb.3,1912; p. 204; 1000 w; charts; 20c.

Argall, P. H.—*Colorado Metallurgical Progress;* [Review for 1911].—M. & S. P., Jan.6,1912, p. 78; 3200 w*; 35c.

Argall, P.—*Reducing Costs, Increasing Profits;* [Cyanidation of Cripple Creek, Colo., $3 sulpho-telluride ore.—Banker & Investor Mag., Oct.,1911, p. 368; 1800 w; 50c. Reprint in Mining & Engg. World, Apr.27,1912; p. 915; 1500 w; 10c.

von Bernewitz, M. W.—*Customs Treatment at Kalgoorlie;* [Sampling, roasting and milling at Associated Northern Blocks mine and mill].—Mng. & Engg. Rev., March,1912; p. 239; 2700 w*; 35c.

von Bernewitz, M.—*Ore Treatment at the Associated Mine, Kalgoorlie;* [Roasting and cyaniding sulpho-tellurides].—Mng. Mag., Feb.,1912; p. 127; 3000 w*; 45c. Reprint in W. Australian Mng., etc., Jnl., March16, p. 7; 3000 w; 35c.

Caldecott, W. A. (Editor).—*Textbook of Rand Metallurgical Practice, Vol. I.*—London, Philadelphia, Johannesburg, 1911-12; 468 pp.; $6.50; (book). See under Transvaal.

Clark, D.—*Australian Mining and Metallurgy.*—Melbourne, 1911; 600 pp.*; $6.50 (book).

Dodge, W. R.—*Retreatment of Mill Tailings at Cripple Creek, Colo.*—Mng. Sci., Dec.14,1911, p. 528; 2400 w*; 20c. Abstract in Mining & Engg. World, Feb.17, 1912, p. 410; 1200 w*; 10c.

Edmands, H. R.—*Cyaniding Weathered Pyritic Tailing;* [Mulline, W. Australia].—E. & M. J., March23,1912; p. 605; 2800 w; 25c.

Gieser, H. S. and C. A. Tupper.—*Mine and Mill of the Brakpan Mines, Ltd., Rand.* M. & S. P., Dec.23,1911, p. 796; 3000 w*; 20c.

Graham, S. N.—*The McIntyre Mine and Mill, Porcupine.*—Canadian Mng. Jnl., Apr. 1,1912; p. 233; 750 w*; 25c.

Gray, Alex.—*The Mother Lode Mill, Sheep Creek, B. C.*—Mng. Jnl., May25,1912; p. 513; 400 w; 35c.

Guillet, L.—*L'or en France;* [Mining and metallurgy of gold in France].—Soc. Amicale d. Mineurs de Douai, Bull; Apr.25,1912; p. 241-256; May 10, p. —; 50c.

Holt, T. P.—*Metallurgy of Mercur Gold Ores;* [Practice at oldest American cyanide mill].—Mines & Minerals, Jan.,1912; p. 355; 1800 w*; 35c. Abstract in Mining & Engg. World, Feb.10,1912, p. 359; 1200 w*; 10c.

Hutchinson, J. W.—*Operating Costs at the Goldfield Consol. Mill, Nev.*—M. & S. P., Jan.20,1912, p. 137-140*; 1000 w; charts; 20c.

Irvin, D. F.—*An Electrical Drier for Zinc Precipitate.*—M. & S. P., March16,1912, p. 405; 500 w*; 20c.

Jacobs, E.—*Metallurgy in British Columbia in* 1911.—See British Columbia.

James, Geo. A.—*Keeping Gold out of Concentrate;* [Cyaniding vs. Amalgamation].—M. & S. P., May4,1912; p. 629; 750 w; 20c.

Jänecke. — *Gold-Silver-Copper.* — See alloys.

Jarman, A.—*Mining and Ore Treatment at the Talisman Mine, Karangahake, N. Z.;* [Read to Australasian Inst. Mng. Engrs.; abstract].—Mng. & Engg. Rev., Feb.5,1912; p. 193; 8000 w*; 45c. Also in Mines & Minerals, Feb., p. 443; 4800 w*; 35c.

Kidder, S. J.—*Operating Costs at the Pittsburgh-Silver Peak Mill;* [Blair, Nevada].—M. & S. P., Feb.10,1912; p. 239-242; charts; 20c.

Lass, W. P.—*The Cyanide Plant at the Treadwell Mines, Alaska;* [Cyaniding concentrates].—Amer. Inst. Mng. Engrs., Trans. for Oct.,1911; 34 pp*; $1.15.

Abstract in M. & S. P., Oct.21,1911; p. 514; 6300 w*; 20c. Also in Mng. Sci., Apr. 18,1912; p. 346; Apr.25, p. 369; 5000 w; 30c.

Linderfelt, T. C. and J. K. Stewart.—*Stratton's Independence Mill;* [Treatment of low-grade tailings at Cripple Creek, Colo.].—E. & M. J., Feb.10,1912; p. 311; 2700 w*; 25c.

Martin, Al. H.—*Mining and Milling Costs in the Goldfield District.*—Mining & Engg. World, June8,1912; p. 1241; 2100 w*; 10c.

MacFarren, H. W.—*Present Tendency in Gold and Silver Metallurgy.*—Salt Lake Mng. Rev., Apr.30,1912; p. 18; 2500 w*; 25c.

Minnich, —. *Die Fortschritte der Goldaufbereitung und ihre Beziehung zur Lagerstättenlehre;* [Recent progress in metallurgy of gold, and bearing on the nature

and geology of gold ores].—Zts. f. prakt. Geologie, Dec.,1911, pp. 432-466*; 75c.

Perry, R. W.—*Cyaniding Tailings in Colombia;* [Santa Rosa de Osos district, Antioquia].—E. & M. J., March9,1912, p. 498; 2500 w*; 25c.

Poole. W.—*Treatment of Broken Hill Ores.*—See New South Wales.

Scott, W. A.—*The Nevada Hills Mill, Fairview, Nev.*—M. & S. P., Jan.20,1912, p. 343; 1000 w*; 20c.

Stadler, H.—*The New Metallurgy and the E. Rand Propr. Mines;* [Claims excessive refinement for present metallurgic practice, and advocates return to simpler methods].—E. & M. J., June8,1912; p. 1123; 1500 w; 25c. Also in Mines & Minerals, July, p. 739; 3600 w*; tables; 35c. Also in M. & S. P., July20, p. 78; 4000 w*; 20c.

Taylor, G. M.—*Construction Costs at the New Portland Mill, Cripple Creek, Colo.*—M. & S. P., Jan.6,1912, p. 12; chart; 35c.

Theobald, —. *Die Herstellung des Blattmetalls in Altertum und Neuzeit;* [The production of gold foil and metal foil in antiquity and in modern times].—Glaser's Annalen, March1,1912; p. 91-99*; 50c.

Thomas, J. E.—*Treatment of Sand.*—See Caldecott's "Rand Metallurgic Practice," under Transvaal.

Traphagen.—*Low-Grade Ore Problem in Colorado.*—See under Zinc.

Worcester, S. A.—*A Cripple Creek Ore and Waste Plant.*—E. & M. J., June15, 1912; p. 1173; 1500 w*; 25c.

Worcester, S. A.—*Colburn-Ajax Mill, Victor, Colo.;* [Using Moore-Clancy process].—E. & M. J., Apr.13,1912; p. 753; 2700 w*; 25c.

———. *American Mining Interests in Korea;* [Low-grade gold mines and milling of Oriental Cons. Mng. Co.].—Mining & Engg. World, June1,1912; p. 1140; 1500 w; 10c.

———. *Grade and Recovery; and Need for Economy on the Rand.*—S. Afr. Mng. Jnl., May11,1912; pp. 382; 383; 3000 w; 35c.

———. *Mines of the Witwatersrand;* [Series of articles describing individual mines and mills, published in S. Afr. Mng. Jnl.].—See under Transvaal.

———. *Portland Mine and Mill, Cripple Creek, Colo.*—Mines & Minerals, Apr., 1912; p. 562; 1000 w*; 35c.

———. *Remodeling the Smuggler-Union Mill, Telluride, Colo.*—Met. & Cheml. Engg., April,1912; p. 195; 1000 w*; 35c.

———. *Report of the Tonopah-Belmont Development Co.;* [Includes new flow-sheet of Belmont mill, March1,1912].—M. & S. P., May4,1912; p. 624; 2000 w*; 20c.

———. *The "Big Mill" Policy on the Rand.*—S. Afr. Mng. Jnl., Dec.17,1912, p. 519; 1000 w; 35c.

———. *The Hollinger Mill;* [Proposed treatment plans; from annual report for 1911].—Canadian Mng. Jnl., Apr.1,1912; p. 230; 1000 w; 25c.

———. *The Modder B Machinery and Plant;* [Visit by S. Afr. Inst. of Engrs.]—S. Afr. Mng. Jnl., March23,1912; p. 119; 1500 w; 35c. Also in S. Afr. Engg., May, 1912; p. 81; 1500 w*; 35c.

———. *The Treatment of Tailing Dumps on the Rand.*—Mining & Engg. World, Apr. 6,1912; p. 772; 1400 w; 10c.

———. *Zur Entwickelung des Erzbergbaues in Mexiko;* [Costs and practice at a copper-gold-silver mine and mill in Durango].—Erzbergbau, Apr.15,1912; p. 142; 1600 w*; 35c.

SMELTING; REFINING

Austin, W. L.—*Leaching Applied to Copper Ore; XVI: Recovery of Silver and Gold Content;* [Cyaniding and other processes].—Mines & Methods, March,1912; p. 433; 5000 w; 20c. Abstract in Mex. Mng. Jnl., June, 1912; p. 36; 4500 w; 25c.

Benner, R. C. and M. L. Hartmann.—*The Early History of Cupellation.*—M. & S. P., Apr.6,1912; p. 501; 1800 w; 20c.

von Bernewitz, M.—*Treatment of Matte from Mill Clean-Up;* [At Asso. Northern Blocks, W. Australia].—M. & S. P., March 2,1912; p. 343; 1000 w; 15c. Also in Queensl. Gov't. Mng. Jnl., June, p. 275; 800 w; 35c.

Brooks, C. J.—*Cupellation of Gold Precipitate;* [at Bau, Borneo].—Mng. Mag., March, 1912; p. 193; 2600 w*; 35c. Abstract in Mining & Engg. World, July6, p. 18; 1000 w; 10c.

Clark, D.—*Gold Refining.*—Melbourne, 1911; 134 pp.*; $4 (book).

Conklin, H. R.—*Electric Furnace at Lluvia de Oro;* [for melting cyanide precipitate; Chihuahua, Mex.].—E. & M. J., June 15,1912; p. 1189; 4000 w*; 25c.

Darrow, W. E.—*Treatment of Matte from Mill Clean Up;* [at Amador City, Cal.].—M. & S. P., Apr.6,1912; p. 508; 500 w; 20c.

Downer, F. M.—*The Denver Mint and Its Operation;* [Read to Colo. Electric Club].—Mng. Sci., May16,1912; p. 426; 1400 w; 20c.

Durham, E. B.—*Electrolytic Refining at the U. S. Mint, San Francisco, Cal.;* [Silver, gold, platiniferous copper].—Amer. Inst. of Mng. Engrs., Trans. for Oct.,1911, pp. 811-838*; $1.15.

Abstract in E. & M. J., Nov.4, p. 901; Nov.11, p. 950; 6500 w*; 45c. Also in Mines & Minerals, Jan.,1912, p. 361; 5000 w*; 35c.

Hubbard, J. D.—*A Convenient Slag Furnace;* [Reduction of slags in melting cyanide precipitate at Oriental Consol. Mng. Co., plant, Taracol, Korea].—M. & S. P., Apr.27,1912; p. 597; 1000 w*; 20c.

Johnson, E. H.—*Clean-Up and Smelting.*—See Caldecott's "Rand Metallurgic Practice," under Transvaal.

Kern, E. F. and A. A. Heimrod.—*Volatilization of Gold and Silver From Their Copper Alloys.*—Columbia School of Mines Quar'ly, Nov.,1911, pp. 34-65*; 65c.

Liddell, D. M.—*Treating Metal Junk.*—E. & M. J., March2, p. 452; 4000 w*; 25c.

Rigg, E.—*The Melting of Bullion in Electric Gas-Fired Furnaces;* [Report of Supt. Operatg. Dept. of British Mint; Crown Doc. No. 5862].—London, 1911.

———. *Cost of Melting Gold Precipitate;* [With Faber du Faur tilting furnace, coke fuel].—E. & M. J., Apr.27,1912; p. 837; 300 w; 25c.

———. *Melting at the British Mint.*—E. & M. J., Feb.24,1912; p. 399; 600 w; 25c.

———. *Progress of the Witwatersrand Co-Operative Smelting Works;* [for smelting slags, pots, liners, black sands and gold works refuse].—S. Afr. Mng. Jnl., March 30,1912; p. 142; 750 w*; 35c.

———. *The First Mint in California.*—Mining & Engg. World, Dec.2,1911, p. 1111; 500 w*; 10c.

———. *The Bradley Process;* [Chlorination extraction of gold, silver and cop-

per from waste copper slimes at Washoe concentrator].—Mng. Jnl., Apr.6,1912; p. 326; 1200 w; 35c.

Assaying; Chemistry

See also chapter on "Metallurgy and Chemistry," in Part III.

Caldecott, W. A.—*Chemistry of Banket Ore Treatment.*—See under Transvaal.

Dewey, F. P.—*Cadmium and Nickel in Cyanide Bullion;* [Erratic mint assays, and causes].—E. & M. J., Apr.13,1912; p. 733; 1000 w; table; 25c.

French, H.—*Congress Continues the Mints and Assay Offices;* [Reviews unsuccessful movement to close western and southern mint and assay offices].—Mining & Engg. World, June8,1912; p. 1193; 2500 w; 10c.

Friedrich, K.—*Zur Quantitativen Bestimmung minimaler Mengen von Silber und Gold;* [Quantitative estimation of minute quantities of gold and silver].—Inst. f. Metallographie & Probierkunde an Freiberg; Mittlngn f. 1910; pp. 68-72; $3.20.

Gibson, W. L.—*Assay of Zinc Box Precipitates.*—Mining & Engg. World, Apr.27, 1912; p. 930; 400 w; 10c.

Johnston, A. McA.—*On Testing; Cyanide Solutions, Supplies, Gold Ore, and Testing a Plant in Operation.*—See Caldecott's "Rand Metallurgic Practice," under Transvaal.

Johnston, A. McA.—*Assaying.*—See Caldecott's "Rand Metallurgic Practice," under Transvaal.

Kern, Edw. F. and A. Heimrod.—*The Determination of Gold and Silver in Copper Bullion.*—Met'g'l & Cheml. Engg., Oct.,1911, p. 496; 3100 w; 35c. Abstract in Mining & Engg. World, Jan.13,1912; p. 74; 2000 w; 10c.

Layng, H. R.—*Method for Assaying Zinc-Box Precipitate.*—Mining & Engg. World, March23,1912; p. 659; 2100 w*; 10c.

Mahringer, A.—*Die Abwässer der Edelmetallwarenfabriken und die Bestimmung des enthaltenen Edelmetalls;* [Waste waters of precious-metal factories, and the determination of precious metals therein].—Elektrochem. Zts., Feb.,1912, p. 301; March, p. 337; 6000 w*; $1.

Middleton, G.—*Practice at the Canadian Assay Office at Vancouver.*—Mining & Engg. World, Jan.13,1912; p. 64; 500 w; 10c.

Stadler, H.—*Practical Applications of the Specific Gravity Flask;* [From Cheml. Metgl. & Mng. Soc. of S. Afr., Jnl., Nov., 1911; abstract].—M. & S. P., Jan.27,1912; p. 166; 1600 w*; 20c. Also in Mines & Minerals, March, p. 489; 1600 w*; 35c. Also in Mining & Engg. World, March16, p. 614; 1800 w; 10c. Also in Met. & Cheml. Engg., Apr., p. 243; 1200 w; 35c.

Stewart, J. B.—*Presenting Assay Results by Graphic Methods.*—M. & S. P., May11, 1912; p. 654; 3500 w; 20c.

Trenkner, —. *Die quantitätive Bestimmung der Edelmetalle Gold, Silber, Platin;* [Quantitative estimation of gold, silver, platinum].—Metallurgie, Feb.8,1912; p. 103; 1500 w; 50c.

Wilson, P. D.—*Notes on the Assay of Sulphide Ores* [of gold or silver; also furnace products].—Mex. Mng. Jnl., May,1912; p. 27; 2000 w*; 25c.

N. R.—*Difficulties in Sampling Free-Milling Gold Ore.*—Mines & Minerals, June, 1912; p. 659; 300 w; 35c.

———. *Method of Detecting Gold Where Values Are Low.*—Mining & Engg. World, Jan.6,1912, p. 16; 400 w; 10c.

———. *U. S. Assay Offices; Methods of Operation.*—Mining & Engg. World, Feb.24, 1912, p. 461; 3000 w; 10c. Reprint in Los Angeles Mng. Rev., March9,1912, p. 5; 3000 w; 20c.

Statistical; Market Reviews

Breen, L. A.—*Gold and Silver Production During* 1911.—Mng. Sci., Jan.25,1912, p. 63; 2800 w*; 25c.

Dushman, S.—*Gold and Silver Production of Canada.*—M. & S. P., Dec.30,1911, p. 833; 1000 w; 25c.

Hobart, F.—*Gold, Silver and Platinum in* 1911; [General review of production].—E. & M. J., Jan.6,1912, p. 3; 2100 w; 35c.

McCaskey, H. D.—*The Production of Gold and Silver in* 1910 [in U. S., review by states].—U. S. Geol. Survey, Mineral Resources f. 1910; 1911; 39 pp.; 10c.

———. *Dividends of Transvaal Mining Companies in* 1911.—Mining & Engg. World, March23,1912; p. 661; 2200 w; 10c.

———. *Gold and Silver Production of the U. S.;* [Review for 1911].—Mining & Engg. World, Jan.27,1912; p. 156; 2500 w; tables; 10c.

———. *Gold Production of Australia in* 1911; [Production monthly in each state].—Mining & Engg. World, Feb.24,1912; p. 467; 500 w; tables; 10c.

———. *Indian Monthly Gold Output;* [1909-1911.]—Mng. Jnl., Jan.6,1912; table; 35c.

———. *La produccion y distribucion de oro, del mundo, en los ultimos 21 años;* [Production, distribution and uses of the world's gold supply for the past 21 years].—Econom. Mex., May18,1912; p. 115; 500 w; tables; 35c.

———. *La production de l'or en* 1911; [Review of world's gold production, 1911].—Echo d. Mines, Jan.18,1912; p. 67; 1000 w; 35c.

———. *Phantom Profits;* [Net vs. actual vs. operating vs. distributed profits in gold mining by leading companies].—Mng. Mag., Apr.,1912; p. 255; 2000 w; 45c.

———. *Rand Features and Figures in* 1911; [Statistics of costs, grades and profits].—S. Afr. Mng. Jnl., Feb.3,1912; p. 784; 500 w; table; 35c.

———. *Review of Metal Production in the U. S.;* [Gold and silver, by states, 1911].—M. & S. P., Jan.6,1912, p. 6; 1000 w; table; 35c.

———. *The Mineral Output of the Transvaal in* 1911.—Mining & Engg. World, Apr. 6,1912; p. 768; 1500 w; 10c.

———. *The Transvaal's Output Record for* 1911.—Afr. World, Jan.13,1912, p. 569; 1000 w; tables; 35c.

———. *The World's Gold and Silver Production in* 1911.—Mining & Engg. World, Jan.27,1912; p. 154; 2000 w; tables; 10c.

———. *The Year Among the Gold Mines;* [Reviews year's production, 1911].—M. & S. P., Jan.6,1912, p. 4; 1000 w; 25c.

———. *Transvaal Gold Mines' Dividends for* 1911.—S. Afr. Mng. Jnl., Dec.23, 1912, p. 559; 1000 w; tables; 35c.

Geology and Genesis

See also "Ore Genesis and Mining Geology" in last chapter.

Bergeat.—*Geology of Contact Ore Deposits, Concepcion del Oro, Mex.*—See Copper.

Beyschlag, F., P. Krusch, and J. H. L. Vogt.—*Die Lagerstätten der nutzbaren Mineralien und Gesteine nach Form, Inhalt und Entstehung. 2te Band; 1ste. Hälfte;* [Monograph of the Deposits of Useful Minerals and Rocks, Classified by Structure, Composition and Origin; 3 volumes. Vol. 2, Part 1: Fissures and fissuring, secondary gold-silver lodes, original gold lodes, metasomatic gold deposits, old or original lead-silver-zinc lodes,. radium lodes, metasomatic lead-silver-zinc ores, antimonial lodes].—Stuttgart, 1912; 290 pp; 66 figs; $2.50 (book).

Blackmore, H. S.—*The Facts About Gold, Silver and Iodine in Sea Water.*—Cassier's Mag., Jan.,1912, p. 3; 3500 w; 35c.

Coghill, W. H.—*Solution of Placer Gold and Silver* [and amounts present in sea water].—M. & S. P., Jan.20,1912, p. 141; 1500 w; 20c.

Friedrich, K.—*Untersuchungen über den Goldgehalt von Gebirgsproben und Solen deutscher Salzlagerstätten;* [The gold content of the rocks of German rock-salt deposits and brines].—Inst. f. Metallographie & Probierkunde an Freiberg, Mittingn. f. 1910; pp. 73-75; $3.20.

Hatch, F. H.—*The Conglomerates of the Witwatersrand;* [Geology and genesis].—"Types of Ore Deposits," by H. F. Bain, and others; 1911; pp. 202-218*.

Hatschek & Simon.—*Deposition of Gold from Silicic Acid Gels.*—See Ore Genesis in last chapter.

Hore, R. E.—*Decrease of Values in Ore Shoots with Depth;* [Michigan copper; Cobalt, Ont., silver; Porcupine, Ont., gold].—Canadian Mng. Jnl., Apr.15,1912; p. 260; 4000 w; 25c.

McCombie, J.—*Deep Mining;* [Discusses continuity of ore bodies, or discontinuity, with depth].—Mng. Mag., March,1912; p. 203; 1000 w; 35c.

Ricard, T. A.—*Domes of Nova Scotia.*—See under Nova Scotia.

Tyrrell.—*Law of the Pay Streaks in Klondike Placers.*—See Yukon.

IRON AND STEELS

Ores and Mining

LAKE SUPERIOR REGION (INCLUDING ONTARIO)

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Baxter, Chas. H.—*Diversion of the Sturgeon River at the Loretto Mine;* [to permit iron mining about river bed].—Lake Superior Mng. Inst., Proc., 1911; pp. 168-170.*

Burr, F. L.—*Square Set Mining at the Vulcan Mines.*—Lake Superior Mng. Inst., Proc., 1911; pp. 144-155.*

Abstract in Mining & Engg. World, Jan. 13,1912, p. 65; 2500 w; 10c. Also in Mines & Methods, Feb., p. 409; 2500 w*; 20c. Also in Mines & Minerals, May, p. 613; 2000 w*; 35c.

Cayeux, L.—*Existence de restes organiques dans les roches ferrugineuses associées aux minérais de fer Huroniens des Etats Unis;* [Existence of echinoderms and other fossils in the Huronian iron-bearing formations in the U. S.].—Acad. d. Sci., Paris, C-R.; Vol. 153, 1911; pp. 910-912; $1.

Concklin, B. M.—*Special Method of Mining on Dangerous Ground on the Mesaba Range, Minnesota;* [Square-set under weak cover].—Wisconsin Engr., Apr.,1912; p. 326; 500 w*; 30c.

Reprint in Mng. Sci., May9, p. 413*; 20c. Also in Mining & Engg. World, May25, p. 1098*; 10c. Also in E. & M. J., June22, p. 1219; 25c.

Conlin, T., and P. O'Brien.—*Historical Sketch of Menominee Range, and Description of Mines on the Menominee Range.*—Lake Superior Mng. Inst., Proc., 1911; pp. 7-41.

Edwards, Geo. E.—*Review of Mining in the U. S.; Lake Superior Iron.*—Mining & Engg. World, Jan.27,1912; p. 217; 5000 w; 25c.

Edwards, Geo. E.—*Electrification of the Penn Mines, Menominee Range, Mich.*—Mining & Engg. World, March16,1912; p. 593; 2500 w*; 10c.

Edwards, Geo. E.—*Mining Practice in Pioneer District of Iron Range;* [Hoisting and mining practice south of Menominee river in Wisconsin].—Mining & Engg. World, Apr.27,1912; p. 907; 2000 w*; 10c.

Edwards, Geo. E.—*The Chapin Mine of the Oliver Iron Mng. Co.;* [Menominee range, Mich.].—Mining & Engg. World, March2,1912; p. 499; 1200 w*; 10c.

Estep, H. C.—*A Quiet Year on the Minnesota Iron Ranges;* [Review of Mesabi, Vermilion and Cuyuna ranges, 1911].—Iron Trade Rev., Jan.4,1912; p. 26-36*; 60c.

Goetz, Al.—*The Eastern Michipicoten Iron Range;* [East of Lake Superior; north of Sault Ste. Marie, Ont.; mines and geology].—E. & M. J., June1,1912; p. 1090; 3500 w*; 25c.

Gow, A. M.—*Some Safety Devices of the Oliver Iron Mining Co.*—Lake Superior Mng. Inst., Proc., 1911; pp. 156-167.*

Hearding, J. H.—*Reminiscences of the Gogebic Range, Ironwood, in* 1887.—Lake Superior Mng. Inst., Proc., 1911; pp. 244-250.

Lauck, W. J.—*Iron-Ore Mines on Mesabi and Vermilion Ranges;* [Labor conditions and nationalities of employes].—Mining & Engg. World, Dec.23,1911, p. 1269; 2000 w; 10c.

Lauck, W. J.—*The Iron-Ore Miner of Northern Michigan.* — Mining & Engg. World, March9,1912; p. 559; 3000 w; 10c.

Leith, C. K.—*Iron-Ore Reserves of Michigan in* 1911.—U. S. Geol. Surv., Mineral Resources for 1911; 18 pp.*; 10c. Abstract in M. & S. P., June8, p. 912; p. 799; 2200 w; 20c.

Low, V. F. S.—*Impressions Gathered While Traveling;* [Includes notes on iron mining on Mesabi range, Minnesota.—Australian Mng. Standd., Apr.11,1912; p. 337; 1600 w*; 35c.

McDonald, P. B.—*Iron River District, Mich.*—E. & M. J., Jan.27,1912, p. 210; 1500 w*; 25c.

McEachern, Wm. A.—*Top-Slicing at the Caspian Mine.*—Lake Superior Mng. Inst., Proc., 1911; pp. 239-243.*

Abstract in Mining & Engg. World, Jan. 20,1912, p. 119; 1000 w*; 10c. Also in Mines & Methods, Feb., p. 418; 800 w*; 25c.

Reagan, A. B.—*Mining in St. Louis and Koochiching Counties, Minnesota;* [Gold and iron].—Mining & Engg. World, June1, 1912; p. 1150; 750 w; 10c.

Roberts, F. C.—*Block-Caving and Sub-Stope System at the Tobin Mine, Crystal Falls, Mich.*—Lake Superior Mng. Inst., Proc., 1911; pp. 218-226.*

Abstract in Mng. Sci., Aug.31,1911, p.

207; 1100 w; 20c. Also in M. & S. P., Sept. 2, p. 491; 1100 w; 20c. Also in Mining & Engg. World, Sept.23, p. 576; 1200 w; 10c. Also in Mex. Mng. Jnl., Feb.,1912, p. 33; 1000 w; 25c. Also in Mines & Minerals, June, p. 674; 1100 w*; 35c.

Thomas, K.—*Non-Bessemer Ore Will Probably Be Principal Product of the Cuyuna Range.*—Iron Trade Rev., May30, 1912; p. 1178; 1000 w; 20c. Also in E. & M. J., May 25, p. 1025; 1000 w; 25c.

Tupper, C. A.—*Power System Cleveland Cliffs Iron Co.;* [Hydro-electric and steam turbine].—Power, Jan.9,1912, p. 40; 1200 w*; 20c. Also in E. & M. J., Feb.3, p. 274; 1200 w*; 25c.

Tupper, C. A.—*Hydro-Electric Power for Minnesota Ranges;* [Gt. Northern Power Co. developments].—Mining & Engg. World, March23,1912; p. 643; 3600 w*; 20c.

Vallat, B. W.—*The Newport Iron Mine;* [Gogebic range; history, geology, mining equipment and practice].—Amer. Inst. Mng. Engrs., Trans. for Oct.,1911, pp. 903-921*; $1.15.

Abstract in Mining & Engg. World, Nov. 25,1911, p. 1064; 4800 w*; 10c. Also in Iron Trade Rev., Jan.25,1912, p. 243; 4500 w*; 20c.

White, E. E.—*Surveying and Sampling Diamond Drill Holes;* [Surveying deflected prospect borings in Lake Superior iron region].—Lake Superior Mng. Inst., Proc., 1911; pp. 100-120.*

Abstract in E. & M. J., Sept.23,1911, p. 587; 3500 w*; 25c. Also in Mines & Minerals, Oct., p. 167; 4500 w*; 35c. Also in Mex. Mng. Jnl., Oct. p. 23; 4500 w*; 25c. Also in Engg. & Contractg., Oct.4, p. 345; 500 w*; 20c. Also in Mining & Engg. World, Nov.25, p. 1061; 3500 w*; 10c.

Woodbridge, D. E.—*Lake Superior Ore Developments;* [Review for 1911].—Iron Age, Jan.4,1912, p. 65; 3000 w; 65c. Also in Engg. & Mng. Jnl., Jan.6, p. 31; 21000 w; 25c.

Youngs, M. P.—*Year of Activity on Old Ranges;* [Review of iron mining in Lake Superior region in 1911].—Iron Trade Rev., Jan.4,1912, p. 47; 2000 w; 65c.

EASTERN AND SOUTHERN U. S.

Bayley, W. S.—*Peculiar Hematite Ore on the Tract of the Durham Mine, Bucks County, Penn.*—Econ. Geol'y, Feb.-March, 1912; pp. 179-184; 65c.

Clark and Miller.—*Coastal Plain Province of Virginia.*—See under Virginia.

Dixon, Chas.—*Brown Hematite Mining in Virginia;* [Underground methods at Low Moor mines].—Mines & Minerals, Apr.,1912; p. 553; 1200 w*; 35c.

Dixon, Chas.—*Limonite Prospecting and Mining;* [Open-cut mining in Virginia].—Mines & Minerals, March,1912, p. 483; 2200 w*; 35c.

Lauck, W. J.—*Nationality of Miners of the Alabama Iron-Ore District.*—Mining & Engg. World, Feb.17,1912; p. 402; 500 w; 10c.

Liston, J.—*Electric Power in Eastern Iron Ore Mines;* [Mineville, N. Y.].—Iron Trade Rev., March21,1912; p. 649; 3200 w*; 20c.

Phenis, A.—*To Ship Ore to Philadelphia;* [Texas ores and dock facilities at Port Bolivar].—Manfrrs. Record, Feb.8,1912; p. 49; 1000 w*; 25c.

Phillips, Wm. B.—*Iron and Steel Making in Texas;* [Review of iron-ore resources].—Iron Age, Jan.11,1912, p. 141; 3000 w; 30c.

Shiflett, R. A.—*Annual Report of the Mining Department of Tennessee for* 1910.—Nashville, 1911; 155 pp; $1.

Thomas, K.—*Low Grade Ore;* [Proposed working of Martic property near Lancaster, Pa., with iron of less than 20% grade].—Iron Trade Rev., June6,1512; p. 1246; 1000 w; 25c. Also in Mines & Minerals, June, p. 674; 1200 w*; 35c.

Wilson, E. B.—*The Cornwall, Penn., Magnetite Deposits* [and mining methods].—Lake Superior Mng. Inst., Proc., 1911; pp. 227-238.*

F. J. R.—*Iron Ore in Fulton County, Penn.*—Mines & Minerals, May,1912; p. 594; 650 w; 35c.

———. *Alabama Cons. Coal & Iron Co.; 2: Shelby Iron Co., Shelby, Ala.*—Manfrrs. Record, Feb.22,1912; p. 102-103; 4000 w*; 65c.

———. *A New Iron-Ore Deposit in Pennsylvania?* [Supposed Fulton county area].—E. & M. J., March30,1912; p. 632; Apr.6, p. 683; 2500 w.

———. *Iron Ore in Mississippi.*—Iron Age, May23,1912; p. 1289; 400 w; 30c.

———. *Texas Iron-Ore Possibilities.*—Manfrrs. Record, Jan.18,1912; p. 49; Feb. 22, p. 49; 5000 w*; 65c.

CENTRAL AND WESTERN U. S.

Jamison.—*Wyoming,* 1911.—See Wyoming.

Martin.—*California,* 1911.—See Calif.

CANADA

Fréchette, H.—*Western Portion of the Torbrook Iron Ore Deposits, Annapolis County, N. S.*—Canada Dept. Mines, Mines Branch Bull. No. 7; 1912; 20 pp*; 50c.

Goodale, S. L.—*A Miner's Summer Trip to Newfoundland.*—Colo. School of Mines Mag., Feb.,1912, p. 96; 1500 w; 35c.

Hamman, H.—*Die wirtschaftliche Lage von Kanada mit besonderer Berücksichtigung der Eisen- und Stahl-Industrie;* [Industrial status of Canada, with special reference to the iron and steel industries].—Berlin, 1912; pp. 95; $1 (book).

Pickings, H. B.—*Metalliferous Mines.*—N. Scotia Dept. of Mines, Rep. f. 1911; 1912; pp. 187-231*; $1.

Robertson, W. F.—*British Columbia,* 1911.—See under Br. Columbia.

Warren, C. H.—*Ilmenite Rocks near St. Urbain, Quebec.*—Amer. Jnl. of Sci., March, 1912; pp. 263-277*; 65c.

Willmott, A. B.—*Opportunities in the Iron Industry in Canada;* [Industrial development and iron resources].—Canadian Mng. Jnl., March1,1912, p. 148; 1500 w; 25c.

MEXICO; W. INDIES; CUBA

Bonillas, Y. S.—*Reconocimiento de algunos criaderos de fierro del Estado de Oaxaca;* [Geologic reconnaissance of some iron-ore deposits in western Oaxaca, Mex.—Inst. Geol. Mex., Parergones, Vol. 3, No. 9; 1911; pp. 501-544*; $1.

Brady, A. C.—*Mexico,* 1911.—See Mexico.

Leith, C. K.—*Las Minas de Mayari;* [The iron ores and mines of Mayari, Cuba].—Ingenieria (Madrid), Nov.30,1911, p. 392; 4500 w; 45c.

Nicholson, H. H.—*Cuba as a Mining Country.*—Mex. Mng. Jnl., June,1912; p. 21; 5000 w; 25c.

Rangel, M.—*Mineral Resources of Durango.*—See under Mexico (Durango).

Wright, I. A.—*The Nipe Bay Country, III:* [Describes workings of Spanish American Iron Co., Cuba].—Pan-Amer. Union, Bull.; April,1912; pp. 471-479*; 35c.

———. *The Mining of Cuban Iron Ores;* [Illustrates equipment at Mayari].—Iron Age, Jan18,1912, p. 205-207; 500 w*; 30c.

SOUTH AMERICA

Avalos, C. G., and G. Young.—*The Iron and Steel Industry of Chile;* [Translated from Soc. Nac. de Mineria, Bol., No. 176-177; 1911].—Mng. Jnl., Apr.27,1912; p. 421; 1000 w; 35c.

Leith, C. K. and E. C. Harder.—*Hematite Ores of Brazil, and a Comparison with Hematite Ores of Lake Superior.*—Econ. Geol'y, Oct.-Nov.,1911; pp. 670-687*; 65c.
Abstract in Iron & Coal Trades Rev., Feb.2,1912, p. 170; 5000 w*; 30c. Also in M. & S. P., Jan.27, p. 172; 1100 w*; 20c.

———. *Note sulla esposizione di Torino;* [Notes on the Turin exposition, 1911; Metallic ores (chiefly iron) of Brazil, Argentina, Siam, Servia, Russia].—Met'l'gia Ital., Dec.,1911; pp. 796-818; 45c.

SCANDINAVIA

Kreuzkam, Dr.—*Die Erzverhältnisse in Schweden;* [The international markets for Swedish iron ore, with special reference to the German market].—Kali Erz & Kohle, Feb.25,1912; p. 198; 1000 w; 35c.

Mesdag, F. T.—*Einige Notizen über Mineralien von den schwedischen Lagerstätten Gellivare, Luossavaara und Sjangeli;* [Notes on some minerals from the iron-ore deposits of Gellivare, Luossavaara and Sjangeli, Sweden].—Zts. f. prakt. Geol., April, 1912; p. 163; 1000 w*; 75c.

Newland, D. H.—*Notes on the Geology of the Swedish Magnetites.*—N. Y. State Mus. Bull. 149; 1911; pp. 107-119; 75c.

Udhaug, A.—*The Sydvaranger Iron Mines;* [Describes ores, mining and ore-dressing].—Iron & Coal Trades Rev., Feb. 2,1912; p. 161; 400 w; 30c.

Wiull, —. *Die Eisenerzgruben in Süd Varanger;* [Iron ore deposits and industry of South Varanger, Norway; read to Ingr. &Arkitekt. Foren. Kristiania, Nov.10,1911; brief abstract in German in] Chemiker Ztg., Dec.12,1911, p. 1376; 500 w; 35c.
English abstract in Mng. Jnl., Feb.17, 1912, p. 165; 1200 w; 35c.

Woodbridge, D. E.—*Mining and Concentrating the Sydvaranger Iron Ores.*—Engg. Mag., April,1912; pp. 9-21*; 35c.

———. *Aus Schweden;* [Development of the Swedish iron industry; review of 1911 meeting of Swedish Miners & Metallurgists].—Centralbl. d. Hütten u. Walzwerke, Dec.5,1911, p. 651; 1200 w; 35c.

———. *Gigantesca Explotacion de minerales de hierro pobres é impuros;* [The iron ores of Sydvaranger and their concentration].—Rev. Minera, Apr.8,1912; p. 165; 1000 w; 35c.

———. *Norwegische Konzessionspolitik in Bezug auf den Erwerb von Erzbergwerken;* [Review of Norwegian legislative principles as applied in the granting of mining concessions].—Erzbergbau, Jan.15,1912; p. 24; 2000 w; 35c.

———. *The Sydvaranger Iron Mines in Norway;* [Mining and milling].—El. Rev. (London), March1,1912; p. 345; 2000 w*; 35c.

———. *The Profits in Iron Ore;* [Output and profits of leading Swedish companies].—Iron & Coal Trades Rev., March 29,1912; p. 488; 2000 w; 35c.

———. *The South Varanger Iron-Ore Deposits, Norway.*—Engnrg., Apr.12,1912; p. 481; 1000 w*; 35c.

GERMANY; LUXEMBURG

Bonikowsky, Dr.—*Die Oberschlesische Montanindustrie;* [The mining industry of Upper Silesia; coal, iron, zinc].—Technik & Wirtschaft, Oct. and Nov.,1911; pp. —; 75c. Also in Oberschlesisch. Berg- & Hm. Ver., Zts.; Jan.,1912; p. 11-20; 7500 w; 45c.

Gerke, A.—*Die maschinelle Abbauförderung in ihrer Bedeutung für die Eisenindustrie;* [Mechanical face conveyors in mines, especially in Silesian iron mines].—Oberschles. Berg- u. Hüttenm. Ver., Zts., Dec., 1911, p. 542; 5600 w*; 45c.

Hollmann, E.—*Ueber Basalteisenstein des nordwestlichen Vogelsberges;* [The basaltic iron ores of the northwestern Vogelsberg range, Hessen; Giessen dissertation, 1909; abstract].—Erzbergbau, May15,1912; p. 171; 1600 w; 35c.

Jüngst.—*Mine Production Rhine-Westphalia District,* 1911.—See under Miscellaneous.

Paquet, I.—*L'industria mineraria e siderurgica nel gran ducato del Lussemburgo;* [Iron and steel industry of Luxemburg].—Met'l'gia Ital., Dec.,1911, p. 819; 2500 w; 45c.

Wehmann, Dr.—*Der Erzberg bei Aumetz;* [The bone-iron ore deposits of Aumetz, German Lorraine, and their history].—Zts. f. Bergrecht, Vol. 53, No. 1; 1912; pp. 84-96; $1.

———. *Entwickelungstendenz in der deutschen Eisenindustrie;* [Tendencies in the development of Germany's iron and steel industry].—Eisen Ztg., March9,1912; p. 168; March16, p. 189; March23, p. 206; 4500 w; 65c.

———. *Le nouveau bassin ferrifère de l'Alpe franconienne;* [New iron ore deposits in the Franconian Alps near Bamberg, Bayreuth and Nuremberg].—Echo d. Mines, March18,1912; p. 347; 1500 w; 35c.
German abstract in S. W. Deu. Industrie Ztg., Apr.16, p. 203; 750 w; 35c.

———. *Le minerai de fer en Lorraine allemande et française;* [Iron ore mining industry in German and French Lorraine].—Soc. Amicale d. . . Mineurs de Douai, Bull., Feb.10,1912; p. 77; 1200 w; 35c.

———. *Weitere Beiträge zur Erzfrage;* [Notes on Germany's need of foreign iron ore].—Centralbl. d. Hütten & Walzwerke, Feb.25,1912, p. 98; 2000 w; 30c.

FRANCE AND REST OF EUROPE

Angelini, V.—*Le miniere di ferro di Cogne, Valle d'Aosta;* [Iron ore deposits of Cogne, Aosta, Italy].—Rassegna Mineraria, March 1,1912; p. 128: 500 w; 35c.

Brull, S.—*Mise en exploitation de la concession de Larchamps, Orne;* [Methods of iron ore mining at Larchamps, Orne dept., France].—Soc. Amicale d . . Mineurs de Douai, Bull.; Jan.10,1912; p. 11-13; 500 w; 35c.

Calvi, G.—*The Production of Iron Ore in the Brenbana Valley, Italy.*—Iron & Steel Inst., Jnl.; Oct.,1911; 12 pp.; 50c. Also in Iron & Coal Trades Rev., Oct.6, p. 518; 3000 w; 30c.
In Italian in Met'l'gia Ital.' Nov.,1911, p. 690-696*; 45c

Capacci, C.—*Le miniere dell'Elba;* [The iron ore deposits of the island of Elba.]—Met'l'gia Ital., Nov.,1911, pp. 707-728*; 45c.

Catani, R.—*I giacimenti di minerali di ferro di Cogne (Val di Aosta) e le altre miniere di ferro del Piemonte;* [Iron ore deposits of Cogne in the Aosta valley, and other iron mines of the Italian Piedmont].—Met'gia Ital., Nov.,1911; pp. 684-690*; 45c.

Ciampi, A.—*The Iron Ore Deposits of Central Italy.*—Iron & Steel Inst., Jnl., Oct., 1911, 20 pp.; 50c. Also in Iron & Coal Trades Rev., Oct.6,1911, p. 519; 5000 w*; 30c.

In Italian in Met'l'gia Ital., Nov.,1911, p. 696-707*; 45c.

de Clercq, H.—*Les minerais de fer d' Espagne;* [The iron ore production of Spain].—Echo d. Mines, Jan.29,1912; p. 116; 750 w; tables; 35c.

Dunning, J. E.—*Iron-Ore Deposits in Lower Normandy;* [Reviews mining industry].—U. S. Consul. Rep., Jan.26,1912; p. 417; June4, p. 923; 1300 w; 30c.

Flegel, K.—*Frankreichs Eisenerze;* [The iron ore production and resources of France].—Berg & Hüttenm. Rundschau, Apr.5,1912; p. 137-146*; 35c.

Hottenger, Geo.—*Le Pays de Briey, Hiers et Aujourd'hui;* [The Briey region, past and present].—Paris, 1912; pp. —; $1.25 (book).

Hutchins.—*Russian Empire in* 1911.—See under Asia (Russia-in-Asia).

John, —. *Die Erzlagerstätten des Eisenbezirks von Bilbao;* [The iron ore deposits of the Bilbao iron fields, Spain; from "Glückauf"].—Erzbergbau, Dec.1,1911, p. 318; 1500 w; 35c.

Laur, F.—*Les ferriers de l'Yonne;* [Iron ore deposits of Yonne dep't., France].—Echo d. Mines, Feb.15,1912, p. 203; 1800 w; 35c.

La Valle, G.—*On the Iron-Ore Deposits of Southern Italy and Sicily.*—Iron & Steel Inst., Jnl.; Oct.,1911; 4 pp.; 50c. Also in Iron & Coal Trades Rev., Oct.6, p. 522; 750 w; 30c.

In Italian in Met'l'gia Ital., Nov.,1911; pp. 738-739; 45c.

Pawlowski, A.—*Le transport des minerais de Meurthe-et-Moselle;* [Transportation problems and facilities in the iron ore fields of Est, France].—Echo d. Mines, Feb.1, 1912; p. 140; 2000 w; 35c.

du Poizat, C.—*La production du bassin de Briey en* 1911; [Iron ore production of the Briey basin in 1911].—Echo d. Mines, Jan.18,1911; p. 66; 500 w; 35c.

Testa, F.—*The Iron Ore Deposits of Sardinia.*—Iron & Steel Inst., Jnl.; Oct., 1911; 18 pp.; 50c. Also in Iron & Coal Trades Rev., Oct.6, p. 517; 5500 w; 30c.

Also in Italian in Rassegna Mineraria, Oct.21, p. 189; 1000 w; 35c. Also in Met'l'gia Ital., Nov.,1911, p. 728-738*; 45c.

Associazone fra gli Industriali Metallurgici Italiani.—*The Metallurgic Industry in Italy; Description of Some of the Principal Works.*—Milan, 1911; 430 pp.*; $2.00.

———. *Altre notizie sui minori giacimenti ferriferi in Italia;* [Notes on the minor iron-ore deposits of Italy; Bologne, Milan, Naples, Rome, Turin].—Met'l'gia Ital., Nov.,1911, p. 740-744; 45c.

———. *British Iron Ore Output in* 1910; [From official report].—Iron & Coal Trades Rev., Dec.15,1911, p. 982; 750 w; 30c.

———. *Contributo a la bibliografia degli studi sui giacimenti ferriferi italiani;* [Bibliography of the iron ore deposits of Italy].—Met'l'gia Ital., Nov.,1911, p. 745-748; 45c.

———. *Das "Bassin von Anjou," ein aussichtvolles neues Eisenerzgebiet Frankreichs;* [The Anjou basin, a promising new iron-ore district of France].—Erzbergbau, May1,1912; p. 157; 1200 w; 35c.

———. *Die Eisenerzförderung im nordöstlichen Frankreich;* [Iron-ore mining in northeast France; list of companies and their output 1909 and 1910].—Deu. Bergwerks Ztg., Suppl. No. 1, Oct.7,1911, p. 2; 1000 w; tables; 35c.

———. *Die neuen Eisenerzlager in Frankreich;* [The newer iron-ore deposits of France and their development].—Techn. Blätter, Apr.13,1912; p. 115; 2000 w; 35c.

———. *Du développement ferrifère de l'Anjou;* [Progress in iron-ore mining in Anjou, France].—Echo d. Mines, Dec.4,1911, p. 1243; 750 w; 35c. Reprinted in Soc. Amicale d. . . Mineurs de Douai, Bull., Feb.25, p. 115; 35c.

———. *Italiens Eisenindustrie;* [Iron industry of Italy; 1: Iron ores and mining].—Stahl & Eisen, Feb.15,1912, p. 271; 3000 w*; 75c.

———. *Le commerce de minerais de fer en France;* [Foreign iron-ore trade of France in 1911; exports and imports].—Echo d. Mines, Feb.5,1912; p. 151; 500 w; 35c.

———. *L'emploi du marteau pneumatique dans les mines de fer;* [Pneumatic hammer drills in the iron mines of Meurthe-et-Moselle, France].—Soc. Amicale d..Mineurs de Douai, Nov.25,1911, p. 751; 1000 w; 35c.

———. *L'importation des minerais de fer en Belgique* [Belgian importations of iron ore].—Echo d. Mines, March14,1912; p. 332; 1000 w; table; 35c.

———. *L'industrie minérale dans la Meurthe-et-Moselle en* 1910; [Iron mining statistics for Meurthe-et-Moselle, France, 1910; labor and output by companies].—Rev. Noire, Jan.21,1912; p. 26; 1000 w; tables; 35c.

———. *Los criaderos de Afra;* [The ore deposits of Afra, Mediterranean Spain; iron and galena].—Ingeniería (Madrid), March 10,1912; p. 77; 2000 w; 35c.

———. *Reglementierung der Ausfuhr von Eisenerzen aus Russland;* [The export of iron ore from Russia and its regulation by law].—Montan. Ztg., Jan.15,1912; p. 26; 750 w; 35c.

———. *Spanish Imports and Exports,* 1911.—Iron & Coal Tr. Rev., Feb.23; p. 288; 500 w; 35c.

———. *Ueber die Entwickelung des Erzbeckens von Briey;* [Development of the Briey iron-ore fields, Lorraine; from Frankfurter Ztg.]—Erzbergbau, Dec.1,1911, p. 321; 600 w; 35c.

———. *Ueber die Preisbildung für Minette;* [The development of prices for minette ores in Lorraine].—Techn. Blätter, Apr. 27,1912; p. 130; 1000 w; 35c.

AFRICA

Campredon, L.—*Les ressources de la France en minerais de fer; Tunisie;* [Iron-ore resources of France; Tunis].—Métallurgie, Jan.10,1912, p. 19; 1000 w; 35c.

English abstract in London Mng. Jnl., Jan.27,1912; p. 103; 700 w; 35c.

Carol, P.—*La question de l'Ouenza;* [The iron ore deposits of Djebel Ouenza, Con-

stantine].—Rev. Indl. du Centre, Jan.27, 1912; p. 9; 1000 w; 35c.

Dussert, M.—*Etude sur les gisements de fer de l'Algérie;* [Monograph on the iron ore deposits of Algeria].—Annales d. Mines (Paris), Feb.,1912; pp. 69-134*; March, pp. 135-256*; $1.20.

French abstract in Soc. Amicale d. Mineurs de Douai; Bull.; May10, p. 279-282; 600 w; 35c.

Italian abstract in Rassegna Mineraria, May11, p. 265; May21; 5000 w; 50c.

Flegel.—*Mineral Deposits of North Africa;* [In German].—See under N. Africa.

Trevor, T. G.—*Ancient Mine Workings in the Transvaal.*—See under Transvaal.

———. *Der deutsche Erzbedarf und die Sozialdemokratie;* [Germany's iron-ore import needs and the Moroccan question].—Centralbl. d. Hütten & Walzwerke, Jan.5, 1912, p. 5; 1800 w; 35c.

———. *Natal's Iron Deposits.*—Afr. World, Feb.10,1912; p. 18; 1200 w; 35c.

———. *Production d'Algérie,* 1911.—Echo d. Mines, March11,1912; p. 306; 35c.

ASIA

Anderson, G. E.—*Iron and Coal Production in China.*—U. S. Consul. Rep., Feb.2, 1912; p. 521; 500 w; 20c. Reprint in Mining & Engg. World, Apr.6, p. 771; 10c.

Dodson, W. D. B.—*China and Chinese Engineering.* (See China.)

Read, T. T.—*The Mineral Production and Resources of China;* [Extracts, on coal and iron, from paper read to Amer. Inst. Mng. Engrs., Oct., 1911].—Iron & Coal Trades Rev., May10,1912; p. 760; 7500 w*; 45c.

———. *Primorsk Prospects, Siberia.*—Mng. Jnl., Feb.3,1912; p. 111; 1200 w; 35c.

AUSTRALIA

Dunn, E. J.—*Limonite near Dookie, Victoria.*—Australian Mng. Standd., Apr.18, 1912; p. 356; 500 w; 35c.

———. *South Australia, July-Dec.,* 1911. Mng. Jnl., May4,1912; p. 426; 35c.

TRANSPORT AND HANDLING

Clark, W. A.—*Iron-Ore Docks on the Lakes;* [Statistical record of shipping docks on Lakes Superior and Michigan, with dimensions, capacities, etc.].—Iron Age, May16,1912; p. 1227; 500 w; table; 30c.

Cushing, G. H.—*Iron Ore Movement on the Great Lakes in* 1911.—M. & S. P., Jan. 6,1912, p. 43; 2800 w; 35c.

Gjessing, O.—*The Operation of Electric Ore Roads in Sweden.*—Mining & Engg. World, May25,1912; p. 1085; 2000 w*; 10c.

Heym, W.—*Moderne maschinelle Ausrüstungen in amerikanischen Stahlwerken;* [Modern machinery in the iron mining and steel industries].—Kali Erz & Kohle, March 25,1912; p. 303; 2500 w; 35c.

King, W. E.—*A Concrete and Steel Ore Dock Having New Features in its Design;* [Allouez Bay, Wis.].—Engg. Record, March 9,1912; p. 256; 2700 w*; 20c.

Pawlowski, A.—*Une Normandie Inconnue; le Bassin Minier de la Basse-Normandie;* [The iron-mining and smelting industry in Basse Normandy, France].—Paris, 1911; pp.—; $1.00 (book).

Petersen, A. G.—*Utlastningsanordningar för malm paa ön Elba;* [Iron-ore loading and transportation equipment on Elba island].—Jernkontor. Annaler, Häfte 7; Dec., 1911; pp. 979-988*; 45c.

Phillips, Wm. B.—*The New Iron-Ore Dock at Port Bolivar;* [Galveston Bay, Texas].—Iron Age, Apr.18,1912; p. 974; 1500 w*; 30c.

Rice, S.—*All-Water Transport of German Iron Ore;* [Discusses canal transportation, barges and unloading, especially at *Henrichenburg*].—Mining & Engg. World, May11,1912; p. 995; 1800 w*; 10c.

Schmeisser.—*Ueber Erzverladungen in Narvik;* [Iron ore loading at Narvik, Norway; from Oestr. Ingr. & Archt. Ver., Zts., No. 50, 1911; brief abstract].—Montanist. Rundschau, May16,1912; p. 458; 500 w; 35c.

Tupper, C. A.—*Modern Ore Handling Methods in Spanish Iron Mines.*—Mining & Engg. World, Jan.20,1912; p. 107; 2500 w*; 10c. Abstract in W. Australian Mng., etc., Jnl., Apr.6, p. 12; 2400 w; 35c.

German abstract in Erzbergbau, March1, 1912, p. 66; 1500 w*; 35c.

Tupper, C. A.—*Storage and Ship-Loading Plant, Vivero Iron Ore Co.;* [Lugo, Spain].—Mining & Engg. World, Feb.24, 1912; p. 443; 1800 w*; 10c.

Williams, R. D.—*A Great Lakes* 15,000-*Ton Ore Carrier;* [Steamer Schoonmaker].—Iron Trade Rev., Jan.4,1912, p. 83; 2000 w*; 65c.

A. C.—*Installations de transbordement des minerais de la Société Elba, à l'Ile d'Elbe;* [Iron-ore loading equipment at Elba].—Génie Civil, Jan.6,1912; p. 181; 2000 w*; 50c.

———. *A Modern Iron-Ore Dock and Unloading Plant;* [Penn. R. R. docks at Cleveland].—Iron Trade Rev., Apr.18,1912; p. 845; 3500 w*; 20c.

———. *Cargo-boat à vapeur pour le transport des minerais suédois, système Johnson-Welin;* [The Vollrath-Thamm, new iron-ore steamer for Sweden].—Génie Civil, Dec.30,1911; p. 168; 1000 w*; 50c.

———. *Concrete Ore Dock at Cleveland, Ohio.*—Engg. News, Feb.22,1912; p. 320; 4200 w*; 25c. Also in Engg. Record, Feb. 24, p. 212; 2100 w*; 25c.

———. *Description of the World's Largest Ore Dock;* [Allouez, Wis.; for Mesabi Range iron ores].—Iron Trade Rev., Jan.18, 1912, p. 191; 2500 w*; 20c.

———. *Iron Ore Railroads and Docks in Superior Region.*—E. & M. J., June15,1912; p. 1188; 1200 w; 25c.

———. *Model Ore Handling Plant;* [Electrical cranes and power plant for unloading iron-ore vessels at Philadelphia].—Salt Lake Mng. Rev., March30,1912; p. 15; 1500 w*; 25c. Also in Iron Trade Rev., Apr.4, p. 749; 1500 w*; 20c.

———. *Neuzeitliche Verladebrücken für Eisenerze;* [Modern loading cranes for iron ores at German docks and furnaces].—Centralbl. d. Hütten u. Walzwerke, Dec.5, 1911, p. 652; 1600 w*; 35c.

———. *New Ore Dock at Two Harbors, Lake Superior, Minn.*—Iron Trade Rev., Dec.28,1911, p. 1143; 2000 w*; 25c.

———. *Ore Dock With Storage Capacity of* 50,000 *tons;* [Presque Isle, Mich.].—Iron Trade Rev., Jan.4,1912, p. 23; 1000 w*; 60c.

———. *Replacing a Timber Ore Dock with a Concrete and Steel Structure;* [at Two Harbors, Minn.].—Engg. Record, May 4, 1912; p. 496; 1000 w*; 25c.

———. *Station d'embarquement des minerais de fer de la Ponupo Manganese Co. à Nima-Nima, Cuba;* [Cantilever-crane shiploading equipment at Nima-Nima iron mines

near Santiago, Cuba].—Génie Civil, Feb.10, 1912; p. 293; 500 w*; 50c.

GEOLOGY AND GENESIS

Fermor, L. L.—*On the Origin of the Iron Ores of Swedish Lappland.*—Iron & Steel Inst., Jnl., Oct.,1911; 12 pp.; 50c.
Reprint in Iron & Coal Trades Rev., Oct. 6, p. 530; 3500 w; 30c. Abstract in German in Bergbau, Nov.23, p. 748; 3000 w; 35c. In Italian in Rassegna Mineraria, Dec.21, p. 289; 2500 w; 35c.

Guardiola, R.—*Sobre el origin de los criaderos de Mayari;* [Genesis of the iron ores of Mayari, Cuba].—Rev. Minera, Jan. 16.1912; p. 25; March1, p. 103; 4500 w; 50c.

Kemp, J. F.—*Comparative Sketch of the Pre-Cambric Geology of Sweden and New York.*—N. Y. State Mus., Bull. 149, 1911; pp. 93-106; 75c.

Kemp, Jas. F.—*Contact Deposits;* [Genesis of iron, copper and other contact orebodies].—"Types of Ore Deposits," by H. F. Bain, and others; 1911; pp. 190-201.

Kindelan, V.—*Mas sobre la formacion de los criaderos de hierro de Mayari;* [Genesis of the Mayari iron ore deposits, Cuba].—Rev. Minera, Feb.24,1912, p. 94; 1200 w; 35c.

Leith, C. K.—*The Lake Superior Type of Iron-Ore Deposits.*—"Types of Ore Deposits," by H. F. Bain, and others; 1911; pp. 53-76.

Singewald, J. T.—*Genesis of Certain Devonian Ores;* [Iron ores of Lahn-Dill region, Nassau, interbedded with diabases].—Econ. Geol'y, Feb.-March,1912; p. 191; 1500 w; 65c.

Smyth, C. H.—*The Clinton Type of Iron-Ore Deposits.*—"Types of Ore Deposits," by H. F. Bain, and others; 1911; pp. 33-52.

Winchell, N. H.—*A Diamond Drill Core Section of the Mesabi Rocks, IV;* [Petrography and genesis of Mesabi iron ores].—Lake Superior Mng. Inst., Proc., 1911; pp. 61-69. Reprint in Mining & Engg. World, Aug.26,1911, p. 377; 3000 w; 10c.

Zapffe, C.—*Effects of a Basic Igneous Intrusion on a Lake Superior Iron-Bearing Formation;* [Gunflint district, Minn.].—Econ. Geol'y, Feb.-March,1912; pp. 145-178*; 65c.

ORE DRESSING; ROASTING

Bates, P. H.—*The Present Status of Iron Ore Cement;* [Cements substituting iron oxide for part of alumina; read to 8th convention Natnl. Asso. of Cement Users].—Engg. Record, Apr.20,1912; p. 433; 1500 w; 20c.

Ganet, L.—*Une grosse exploitation arctique de minerai de fer;* [Iron mining in the Arctic; crushing and grinding at Sydvaranger].—Echo d. Mines, March28,1912; p. 391; 35c.

Lämmert, R.—*Anreicherung der Eisenerze in Schweden;* [Dressing and electromagnetic concentration of iron ore in Sweden; review of papers by Nicou, 1911, and Petersson, 1903 and 1910].—Stahl & Eisen, Apr.4,1912; p. 576; 3600 w*; 75c.

Porter, J. J.—*Rational Valuation and Quality-Efficiency of Furnace-Stock;* [Valuing ore, coke and limestones for iron-making].—Amer. Inst. Mng. Engrs., Bull. 63; March,1912; pp. 279-293; $1.15.

Tupper, C. A.—*Magnetic Iron Ore Concentration;* [Practice of crushing and sorting in Norway].—Mex. Mng. Jnl., Jan., 1912, p. 19; 2400 w*; 25c.

Willing.—*Die Spateisenstein - Röstanlage auf der Grube Eisenzecher Zug;* [Recent improvements in spathic-iron-ore roasting at the "Eisenzecher-Zug" plant, Siegen district].—Deu. Bergwerks Ztg., Suppl. No. 3; Nov.1,1911, p. 1; 4000 w; 50c.

Woodbridge, D. E.—*Concentrating and Ore-Briquetting Works, Sydvaranger Mines.*—Mining & Engg. World, Apr.20,1912; p. 856; 600 w*; 10c.

Woodbridge, D. E.—*Beneficiating Lake Iron Ores.*—E. & M. J., Jan.27,1912, p. 222; 1800 w; 25c.

———. *Magnetische Anreicherung von Uralerzen in Herräng;* [Gröndal electromagnetic concentration for iron ores at Ural mines, Herräng, Sweden].—Stahl & Eisen, May16,1912; pp. 822-826*; 75c.

———. *The Large Crusher at the Biwabik Mine;* [Crushes 1000 tons of taconite ore hourly].—Iron Trade Rev., Feb.15,1912; p. 387; 1600 w*; 20c.

BRIQUETTING AND SINTERING (ORE, SCRAP, FLUE DUST)

See also Briquetting, in Chapter 13.

Auzies, J. A. A.—*Sur le briquetage des minerais de fer;* [The briquetting of pyrite cinders as a source of iron ore].—Rev. de Mét'l'gie, Jan.,1912; p. 35; 1000 w; $1.15.

Beneke, Alb.—*Ein Ueberblick über die neueren Brikettierungsmethoden von Eisenerzen;* [Review of recent developments in iron-ore briquetting].—Erzbergbau, Jan.15. 1912; p. 20; 2000 w; 35c.

Fürth, H.—*Eisen- und Stahl Briketts im Giessereibetrieb;* [Use of iron and steel briquets in the foundry].—Giesserei Ztg., Feb.15,1912, p. 105; March1, p. 149; 4000 w; 60c.

Gayley, Jas.—*The Sintering of Fine Iron-Bearing Materials;* [Dwight-Lloyd system on Cuban and other ores and flue dusts].—Amer. Inst. of Mng. Engrs., Bull. 56, Aug., 1911; p. 631; 3000 w*; $1.15.
Abstract in E. & M. J., July15,1911; p. 115; 2000 w; 25c. Also in Iron Age, Aug.24, p. 422; Jan.4,1912; p. 73; 4500 w*; 50c. Also in Iron Trade Rev., Aug.24,1911; p. 336; 3000 w*; 20c. Also in Iron & Coal Trades Rev., Sept.1,1911; p. 313; 3000 w; 30c. Also in Mines & Minerals, Apr.,1912; p. 559; 1900 w*; 35c.

Klugh, B. G.—*Sintering of Fine Iron-Bearing Materials by the Dwight-Lloyd Process.*—Amer. Inst. Mng. Engrs., Trans.; read Feb.,1912; pp. 507-526*; $1.15.
Abstract in Met. & Chemi. Engg., March, 1912; p. 162; 2200 w*; 35c. Also in Iron Trade Rev., March7, p. 544; 2200 w*; 20c.

Klugh, B. G.—*Turning Pyrite Cinders into Profit;* [Dwight-Lloyd sintering for recovery of iron].—Amer. Fertilizer, p. 54; 1000 w; 25c.

Kühl, Hans.—*Die Fabrikation des Portlandzementes aus Hochofenschlacke;* [Manufacture of Portland cement from blast-furnace slag].—Chemiker Ztg., Dec.14,1911, p. 1386; 1100 w; 30c.

Leyde, O.—*Mise en briquettes des tournures métalliques et leur valeur en fonderie de fer et de bronze;* [Briquetting of metal scrap in iron and brass foundries; various methods; from "Stahl & Eisen"].—Rev. de Mét'l'gie, Jan.,1912; p. 37-43*; $1.15.

Mehrtens, J.—*Brikettieranlagen zur Herstellung von Eisen- und Metallspänebriketts der Hochdruckbrikettierung G. m. b. H. in Berlin;* [Some German high-pressure briquetting plants for iron and metal scrap, system of Hochdruckbrikettierungs Co.,

Ltd., Berlin].—Stahl & Eisen, Jan.25,1912, p. 135-143; 3500 w*; 75c.

Vogel, F. A.—*Sintering and Briquetting of Flue Dust;* [Reviews various processes]. Amer. Inst. Mng. Engrs., Trans., May,1912; pp. 533-544; $1.15.

Abstract in Met. & Cheml. Engg., March, 1912, p. 164; 1000 w; 35c. Also in Iron Age, March7, p. 588; 1800 w; 30c. Also in Iron Trade Rev., March7, p. 551; 2000 w*; 20c. Also in Iron & Coal Trades Rev., March22, p. 457; 1000 w; 30c. Also in M. & S. P., Apr.6, p. 503; 1800 w; 20c.

———. *Agglomerazione dei minerali e polveri d'alto forno;* [Briquetting of iron ore and flue dusts by the Weiss process, German Pat. No. 183,108; abstract from Stahl & Eisen, Vol. 31, 1911, pp. 1539-1543].—Rassegna Mineraria, Apr.1,1912; p. 190; 1000 w; 40c.

———. *An Electrically Operated Briquetting plant;* [Grondal-Kjellin process on iron ores at Bede works, Hebburn-on-Tyne].—El. Rev. (London), March8,1912; p. 405; 1000 w*; 35c.

———. *The Utilization of Fine Iron Ores and Residues;* [Gröndal briquetting system].—Iron & Coal Trades Rev., Jan. 19,1912; p. 92; 2000 w*; 30c.

Iron and Steel

EUROPE

d'Auriac, Anglès.—*L'evolution de la sidérurgie française, son état actuel et ses perspectives d'avenir dans le Nord;* [Evolution of siderurgy in France, its present status and future prospects in Nord].—Soc. de l'Ind. Minrl. St. Etienne, C-R, Sept.,1911, p. 507; 1000 w; 75c.

In English in Iron & Coal Trades Rev., March1, p. 324; 2000 w*; 30c.

Crawley, E. W.—*Pig Iron Statistics;* [50 years' statistics Scotch iron; 36 years' Cleveland iron; 30 years' hematite].—Leeds, Engl.; 1911; (pamphlet).

Delmer.—*Belgian Mining and Metallurgy,* 1901-1910. See under Zinc.

Dompé, L. and F. S. Pucci.—*The Present State of the Metallurgical Industry in Italy; I: Pig-iron, Wrought Iron and Steel.*—Iron & Steel Inst., Jnl.; Oct.,1911; 68 pp.; 50c.

Abstract in Iron & Coal Trades Rev., Oct. 6, p. 507; 23,000 w*; 30c. Also in Iron Trade Rev., Dec.28, p. 1139; 4000 w* 25c.

Also in Italian in Met'l'gia Ital., Sept.—Oct.,1911; pp. 460-528*; 45c.

Friedrich, A.—*Das Oberschlesische Roheisen;* [Pig-iron industry of Upper Silesia].—Techn. Blätter, March9,1912; p. 75; 1000 w; 35c.

Fuller, S. J.—*Swedish Iron Trade Review;* [for 1911].—U. S. Consul. Rep., Feb. 24,1912; p. 808; 500 w; tables; 20c.

de Hautpick, E.—*Russia in* 1911.—See under Russia-in-Asia (under Asia).

Hillringhaus, A.—*Der allgemeine deutsche Roheisenverband und seine Vorgeschichte;* [The General Pig-Iron Union of Germany and its historical development].—Giesserei Ztg., Dec.1,1911, p. 727; 2500 w; 35c.

Hillringhaus, A.—*Der neue deutsche Roheisenverband;* [The new German Pig-iron Syndicate].—Centralbl. d. Hütten & Walzwerke, Jan.15,1912; p. 25; 1500 w; 35c.

Kischka, C.—*Einiges über die Stahlindustrie Oberschlesiens;* [Notes on development of iron and steel industries of Upper Silesia].—Kohle & Erz, Apr.1,1912; p. 322; Apr.8, p. 338; 4000 w*; 50c.

Odriozola, A.—*Los obreros minero-metalurgicos del distrito de Santander;* [The mining and metallurgical industry of Santander, Spain].—Rev. Minera, May8,1912; p. 217; 5500 w; 35c.

Paquet, I.—*L'industria mineraria e siderurgica nel gran ducato del Lussemburgo;* [Iron and steel industry of Luxemburg].—Met'l'gia Ital., Dec.,1911, p. 819; 2500 w; 45c.

Pawlowski, A.—*Une Normandie Inconnue; le Bassin Minier de la Basse-Normandie;* [The iron-mining and smelting industry in Basse Normandy, France].—Paris, 1911; pp.—; $1.00 (book).

Pitaval, R.—*L'émigration de la métallurgie allemande vers la frontière française;* [Emigration of the German iron and steel industry toward the French frontier].—Echo d. Mines, Jan.11,1912; p. 34; 1200 w; 35c.

Pitaval, R.—*Revue minière et métallurgique de l'année* 1911; [Review of mining and metallurgy in Europe and abroad in 1911; chiefly coal and iron].—Echo d. Mines, Dec.28,1911, p. 1330; 3000 w; 35c.

Ross, Colin.—*Die Entstehung von Grosseisenindustrie an der deutschen Seeküste;* [The possibilities of the transfer of the German iron and steel industry to the coast towns].—Berlin, 1911; 104 pp; maps; $1.00; (book).

Schumacher, H.—*Die westdeutsche Eisenindustrie und die Moselkanalisierung;* [The necessity of canalizing the Mosel river to develop the iron industry in the southwest Germany-Luxemburg and Rhine-Westphalian districts].—Leipzig, 1911; 162 pp*; $1.50; (book).

Schuster, F.—*Stahlerzeugung oesterreichischer und ungarischer Werke pro* 1911; [Steel production of Austria, Hungary and Bosnia in 1911].—Montanist. Rundschau, March1,1912; p. 217; table; 35c.

Scott, F.—*British Iron and Steel Production in* 1911; [Figures of British Iron Trade Asso.].—Iron & Coal Trade Rev., May10, p. 770; May17, p. 799; 1800 w; tables; 50c.

Tischert, G.—*Krupp;* [History and status of the Krupp industry].—Deu. Bergwerks Zts., Feb.29,1912, p. 1; 2000 w; 35c.

Board of Trade; Commercial, Labor & Statistical Dept.—*Statistical Abstract for the British Empire,* 1896-1910; [Extracts on iron and steel imports and exports of British Empire and colonies].—Iron & Coal Trades Rev., Apr.19,1912; p. 606; 1500 w; tables; 35c.

———. *Aus der russischen Eisenindustrie;* [Review of the Russian iron and steel industry].—Eisen Ztg., Jan.6,1912, p. 4; 1500 w; 35c.

———. *Aus Schweden;* [Development of the Swedish iron industry; review of 1911 meeting of Swedish Miners & Metallurgists].—Centralbl. d. Hütten u. Walzwerke, Dec.5, 1911, p. 651; 1200 w; 35c.

———. *Belgian Imports and Exports of Iron, Iron Ore and Steels.*—Iron & Coal Trades Rev., Jan.26,1912, p. 131; 1000 w; tables; 30c.

———. *Belgian Iron and Steel Trade in* 1911.—Iron & Coal Trade Rev., Jan.5,1912; p. 6; 1200 w; 30c.

———. *Der Britische Aussenhandel in Eisen und Stahl;* [British export trade in iron and steel, Jan.-Sept.,1911].—Centralbl. d. Hütten- u. Walzwerke, Dec.25,1911, p. 694; 750 w; 35c.

———. *Die Aussichten für die Entwickelung des Eisenerz- und Roheisenmarktes im Jahre* 1912; [Outlook for iron-ore and

pig-iron markets in 1912].—Erzbergbau, Jan. 1,1912, p. 3; 1500 w; 35c.

———. *Die Aussichten für die Entwicklung des Eisenerz- und Roheisenmarktes im Jahre* 1912; [Outlook for iron-ore and pig-iron markets in 1912].—Erzbergbau, Jan.1,1912, p. 3; 1500 w; 35c.

———. *Die Gewinnung der Bergwerke, Salinen und Hütten im deutschen Reich und im Luxemburg im Jahre,* 1911; [Statistics of production of mines, salines and smelters in Germany and Luxemburg, 1911.—Glückauf, May4,1912; pp. 717-721; tables; 50c.

———. *Die Lage der oesterreichische Montan-, Eisen-, und Maschinenindustrie im Jahre;* [Condition of the Austrian mining, iron and steel and machinery industries in 1911].—Oestr. Ungar. Montan. etc. Ztg., Dec.31,1911, p. 3; 2500 w; 35c.

———. *Die Montanindustrie im ersten Vierteljahr,* 1912; [Review of iron and steel industry in Germany, first quarter, 1912].—Deu. Bergwerks Ztg., Apr.13,1912; p. 1; 3000 w; 35c.

———. *Die Montanindustrie in Lothringen im Jahre* 1911; [Review of iron and steel industry in Lorraine in 1911].—Deu. Bergwerks Ztg., Feb.10,1912; p. 1; 1200 w; 45c.

———. *Ein Kartell in der Metallurgie Italiens;* [The formation of the Italian steel trust].—Erzbergbau, Dec.15,1911, p. 329; 1000 w; 35c.

———. *Eisenverbrauch im Deutschen Reich einschliesslich Luxemburg* 1861-1911; [Pig-iron consumption of Germany, including Luxemburg, 1861-1911]—Oberschles. Berg- & Hüttenm. Ver. Zts; April,1912; p. 182; tables; 45c.

———. *Ergebnisse der Eisenindustrie Russlands im ersten Halbjahr* 1911; [Statistics of iron and steel products output in Russia, first semester, 1911].—Techn. Blätter, Feb.24,1912, p. 59, 560 w: tables; 35c.

———. *Exports and Imports of Iron and Steel in* 1911; [Gt. Britain].—Coll'y Guardn. Jan.12,1912; p. 77; 1000 w; table; 35c.

———. *French Coal, Iron and Steel Production in* 1911.—Iron & Coal Trades Rev., Apr.12,1912; p. 575; 1000 w; tables; 35c.

———. *French Imports and Exports of Iron and Steel in* 1911.—Iron & Coal Trades Rev., Feb.23,1912, p. 290; 1000 w; tables; 30c.

———. *German Coal and Iron and Steel Trades in* 1911.—Iron & Coal Trades Rev., Jan.5,1912; p. 6; 2000 w; 35c.

———. *German Imports and Exports of Iron and Steel in* 1911.—Iron & Coal Trades Rev., Feb.16,1912; p. 256; 1000 w; tables; 30c.

———. *German Steel Output and Iron Consumption in* 1911.—Iron & Coal Trades Rev., March29,1912; p. 494; 500 w; tables; 35c.

———. *Iron and Steel Industry;* [Review of London Board of Trade volume covering world's ore, pig-iron and iron and steel industry up to Jan.1,1911].—Engg., Dec.22,1911, p. 835; 12000 w; 35c.

———. *Produzione d'acciaio,* 1911; [Statistics of iron and steel production in Austria-Hungary, 1911; iron ore exports, pig-iron imports and exports of Spain, 1910-11; iron and steel production and exports, Sweden, 1909-11].—Metal'gia Ital., March,1912; p. 193; tables; 45c.

G. D.—*Roheisenerzeugung und Eisenverbrauch Deutschlands* 1902-1911; [Pig-iron production and iron consumption of Germany, 1902-1911].—Montanist. Rundschau, May16,1912; p. 457; 500 w; table; 35c.

———. *Swedish Production and Exports of Iron and Steel in* 1911.—Iron & Coal Trades Rev., March1,1912; p. 205; 500 w; tables; 30c.

———. *The German Steel Syndicate; Details of the Statutes.*—Iron & Coal Trades Rev., Apr.19,1912; p. 599; 5000 w; tables; 35c.

———. *The German Steel Works Agreement;* [Discusses 5-year renewal agreement].—Iron Age, May9,1912; p. 1168; 750 w; 30c.

Also discussed in German in S. W. Deu. Industrie Ztg., May14, p. 260; 2400 w; 35c.

———. *The Steel and Iron Trades in* 1911; [British review].—Mng. Jnl., Jan.6, 1912, p. 33; 4000 w; 35c.

AFRICA

Smith, G. H.—*The Manufacture of Steel in South Africa from Scrap.*—S. Afr. Mng. Jnl., Feb.24,1912; p. 905; p. 896; 3000 w; 35c.

———. *Progress of Transvaal Steel Making Scheme.*—S. Afr. Mng. Jnl., Dec.2, 1911, p. 438; 1000 w; 35c. Also in African World, Dec.30, p. 455; 1000 w; 35c.

ASIA

Anderson, G. E.—*Iron and Steel in the Far East;* [Reviews American sales in China and Philippines].—U. S. Consul. Rep., Jan.27,1912, p. 437; 1200 w; 20c.

Read, T. T.—*Mineral Production and Resources of China.*—See under China.

Wang, Cho-Yang and Cheng-Fu.—*Notes on the Han-Yeh-Ping Iron & Coal Co., China.*—Columbia School of Mines Quar'ly, Jan.,1912, p. 165; 1000 w*; 65c. Reprint in Iron & Coal Trades Rev., March8, p. 375; 30c.

———. *Chinese Iron and Steel Production;* [Works of Han-Yang Co.].—Iron Trade Rev., Apr.11,1912; p. 803; 500 w; 20c.

AUSTRALIA

Paul, F. W.—*New South Wales' Iron Industry.*—Australian Mng. Standd., Nov.2, 1911, p. 442; 3000 w*; 35c. Also in Iron & Coal Trades Rev., Dec.8, p. 927; Jan.5, 1912, p. 5; 6000 w; 50c.

———. *Commonwealth Iron Bounty.*—Australian Mng. Standd., Nov.23,1911, p. 516; 2400 w; 35c.

SOUTH AMERICA

Avalos, C. G., and G. Young.—*The Iron and Steel Industry of Chile;* [Translated from Soc. Nac. de Minería, Bol., No. 176-177; 1911].—Mng. Jnl., Apr.27,1912; p. 421; 1000 w; 35c.

UNITED STATES

Abell, O. J.—*The Chicago Iron Trade in* 1911.—Iron Age, Jan.4,1912, p. 59; 1600 w; 65c.

Hobart, F.—*The Iron and Steel Industry in* 1911; [Statistical review in U. S.].—E. & M. J., Jan.6,1912, p. 26; 2400 w; 25c.

Hobart, F.—*The Iron and Steel Industry in* 1911; [Statistical review in U. S.].—E. & M. J., Jan.6,1912, p. 26; 2400 w; 25c.

Lindsley, F. R.—*Continued Decline of Southern Pig-Iron Prices;* [Review for 1911].—Iron Trade Rev., Jan.4,1912, p. 81; 1200 w; tables; 65c.

Luty, B. E. V.—*Pittsburgh Iron and Steel Markets;* [Review for 1911].—E. & M. J., Jan.6,1912, p. 28; 1500 w; 25c.

Miller, A. A.—*The Philadelphia Iron Trade in* 1911.—Iron Age, Jan.4,1912, p. 61; 1800 w; 65c.

Morrison, E.—*The Chicago Iron Market;* [Review for 1911].—E. & M. J., Jan.6,1912, p. 29; 1600 w; 25c.

Phillips, Wm. B.—*Iron and Steel Making in Texas.*—Iron Age, Jan.4,1912, p. 14; 3000 w; 65c.

Pilling, W. S.—*Per Capita Production of Pig-Iron;* [In U. S., 1830-1910].—Iron Age, June6,1912; p. 1419; 1000 w*; 30c.

Porter, J. J.—*The Future of the South in the Manufacture of Iron and Steel.*—Manfrrs. Record, Feb.22,1912; p. 53; 4000 w; 65c.

Smith, Chas. L.—*The Cincinnati Iron Trade in* 1911—Iron Age, Jan.4,1912, p. 64; 1000 w; 65c.

Walker, R. A.—*The Pittsburgh Iron Trade in* 1911.—Iron Age, Jan.4,1912, p. 57; 2500 w; 65c.

Williams, R. D.—*The U. S. Exports of Iron and Steel Products.*—Iron Trade Rev., Feb.15,1912; p. 391; 2400 w*; 20c.

Amer. Iron & Steel Asso.—*Pig-iron Production in* 1911.—E. & M. J., Feb.10,1912; p. 307; p. 296; 1000 w; 25c.

Amer. Iron & Steel Asso.—*Second Supplement to the Directory of the Iron and Steel Works of the U. S.*—Philadelphia; 1912; 80 pp.; $5 (book).

Amer. Iron & Steel Asso.—*The Production of Iron and Steel Ingots in* 1911.—Iron Age, Apr.25,1912; p. 1026; 2000 w; tables; 30c.

National Tube Co.—*Map of the Pittsburgh District Showing Railroad Terminals and location of* 232 *Iron and Steel Works, Jan.*1,1912.—Iron Trade Rev., March28, 1912; insert; 20c.

———. *American Imports and Exports of Iron and Steel,* 1911.—Iron & Coal Trades Rev., Feb.23,1912; p. 285; 500 w; tables; 30c.

———. *Average Monthly Prices of Iron and Steel* 1910 *and* 1911.—Iron Trade Rev., Jan.4,1912, p. 128; and supplemental charts; 65c.

———. *Chronology of Iron and Steel Trades in* 1911.—Iron Trade Rev., Jan.4, 1912, p. 109; 6000 w; 65c.

———. *Development of Iron and Steel Exports;* [U. S.].—Iron Trade Rev., Feb. 29,1912; p. 503; 1000 w; 20c.

———. *Exports and Imports in* 1911 [Iron and steels; U. S.].—Iron Age, Feb.8, 1912; p. 361; 750 w; tables; 30c.

———. *Imports of Foreign Ore in* 1911. —Iron Trade Rev., Feb.1,1912, p. 285; 3000 w*; 20c.

———. *Iron and Steel Industry in U. S. in* 1911; [Also world review, pages 174-177].—Mining & Engg. World. Jan.27,1912; p. 170-177; 9000 w; 10c.

———. *Iron and Steel Prices for* 14 *Years* [in U. S.].—Iron Age, Jan.4,1912, p. 50; tables; chart; 65c.

———. *Iron and Steel in* 1911.—Met. & Cheml. Engg., Jan.,1912, p. 6; 1500 w; 35c.

———. *Iron and Steel Industry in U. S. in* 1911; [Also world review, pages 174-177].—Mining & Engg. World, Jan.27,1912; p. 170-177; 9000 w; 10c.

———. *Pig-Iron Production for* 1911.—Iron Trade Rev., Jan.4,1912, p. 10; 1000 w; tables; 60c.

———. *Pig-Iron Production;* [December statistics for U. S.].—Iron Age, Jan.11,1912, p. 148; 1000 w; tables; 30c.

———. *Pig-Iron Production;* [February statistics, U. S.].—Iron Age, March7,1912; p. 608; 2000 w; tables; 30c. Also in Iron Trade Rev., March7, p. 541; 500 w; tables; 20c.

———. *Pig-Iron Production;* [American statistics for March].—Iron Age, April4, 1912; p. 866; 1000 w; 30c. Also in Iron Trade Rev., April4, p. 742; 1000 w; 20c.

———. *Pig-Iron Production;* [U. S. statistics for April, 1912].—Iron Age, May 9,1912; p. 1172; 1000 w; tables; 30c. Also in Iron Trade Rev., May9, p. 995; 500 w; tables; 20c.

———. *Pig Iron Production, May,* 1912. —Iron Trade Rev., June6,1912; p. 1210; 1000 w; tables; 20c. Also in Iron Age, June6, p. 1420; 30c.

———. *Pig Iron Prices at Cincinnati and Chicago;* [1876-1911].—Iron Age, May 30,1911; p. 1351; tables; 30c.

———. *Record Exports in* 1911 [American iron and steel products].—Iron Trade Rev., Jan.4,1912, p. 8; 600 w; 60c.

———. *Steel Making in* 1911; [Statistics for U. S.].—E. & M. J., May4,1912; p. 870; 1000 w; 25c.

———. *The Steel Corporation in* 1911; [Abstract of annual report].—E. & M. J., March30,1912; p. 658; 3000 w; 25c. Also in Met. & Cheml. Engg., April,1912; p. 192; 1500 w; 35c. Also in Mining & Engg. World, March30, p. 713; 500 w; 10c. Also in Iron Age, March28, p. 775; 4000 w; 30c.

CANADA

Hamman, H.—*Die wirtschaftliche Lage von Kanada mit besonderer Berücksichtigung der Eisen- und Stahl-Industrie;* [Industrial status of Canada, with special reference to the iron and steel industries].—Berlin, 1912; pp. 95; $1 (book).

McLeish, J.—*The Production of Iron and Steel in Canada in* 1910.—Canada Dept. Mines, Mines Branch Publication No. 115; 38 pp.; 25c.

McLeish, J.—*The Production of Iron and Steel in Canada in* 1910.—Canada Dept. Mines, Mines Branch Publication 115; 38 pp.; 25c.

NOMENCLATURE

Hibbard, H. D. and J. W. Richards.—*What is Steel;* [Discussion of Richards' earlier definition].—Met. & Cheml. Engg., June,1912; p. 330; 1000 w; 35c.

Howe, H. M.—*Nomenclature of the Microscopic Constituents of Iron and Steel.*—Met. & Cheml. Engg., Jan.,1912, p. 23; 3900 w; 35c.

In Italian in Rassegna Mineraria, Feb. 11,1912; p. 81; 3600 w; 35c.

Kebler, E. A.—*Iron and Steel Metallurgy in Brief;* [Process from ore to various irons and steels].—Iron Age, Feb.15,1912; p. 412; 1000 w; tables; 25c.

Loudon, T. R.—*Wrought Iron, Bushelled Iron, Ingot Iron;* [Definitions].—Canadian Engr., Jan.4,1912, p. 124; 1100 w*; 25c.

Richards, J. W.—*Steel?* [Discusses definition].—Met. & Cheml. Engg., May,1912; p. 265; 1500 w; 35c.

Vanzetti, C.—*Nomenclatura internationale uniforme dei prodotti siderurgici;* [Uniform international nomenclature of irons

and steels].—Met'gia Ital., Nov.,1911; pp. 663-683; May,1912, p. 316-324; 65c.

Abstract, in Italian, in Rassegna Mineraria, July1, pp. 1-7; 35c.

FERRO-ALLOYS

See also "Special Irons and Steels."

Arnold, J. O., and A. A. Read.—*The Chemical and Mechanical Relations of Iron, Vanadium and Carbon.*—Iron & Steel Inst., Jnl.; May,1912; 15 pp*; 50c. Reprint with discussion in Iron & Coal Trade Rev., May 10, p. 722; p. 740; 5000 w*; 45c. Also in Engnrg., June7, p. 784; 3000 w; 35c.

Camprédon, L.—*Le vanadium et la métallurgie;* [Use of vanadium in steel].—Métallurgie, Jan.3,1912, p. 3; 500 w; 35c.

Davis, R. S.—*Method of Analysis for Wulfenite Ores and Ferro-Boron.*—Mining & Engg. World, June1,1912; p. 1137; 1200 w; 10c.

Ganet, L.—*A propos d'explosions attribués au ferro-silicium dans des poches d'acier;* [Explosibility of ferro-silicon in steel pockets].—Jnl. du Four Electriq., March1,1912; p. 97; 2400 w; 35c. Echo d. Mines, March11, p. 316; 2400 w; 35c.

Guillet, L.—*La fabrication des ferros;* [Manufacture of the ferro-alloys; read to Soc. d. Ingrs. Civ. France; abstract].—Jnl. du Four Electriq., Feb.15,1912; p. 83; March1, p. 104; March15, p. 127; 3500 w; 65c.

German abstract on ferro-silicon.—Elektrotechnik & MaschBau, Feb.18,1912, p. 147; 750 w; 35c.

von Gumberz, A.—*Ferrosilizium Explosionen und ihre vermutlichen Ursachen;* [Ferro-silicon explosions and their causes].—Stahl & Eisen, Feb.15,1912, p. 267; 3500 w; 75c.

Härdén, J.—*Electric Smelting and Reduction of Ore in England;* [Tin, wolfram and ferro-alloys, by Electric Furnaces & Smelters, Ltd.].—Electrician, Dec.29,1911, p. 467; 2500 w; 30c. Abstract in Mining & Engg. World, March16,1912, p. 604; 1500 w; 10c. Also in U. S. Consul. Rep., March23, p. 1192; 1000 w; 20c.

Matt, M. F.—*Ueber die Herstellung von Ferrosilicium;* [On the production of ferro-silicon].—Stuttgart Techn. Hochschule, Dissert., 1911; pp. —; $1.50 (Thesis).

Oberhoffer, P.—*Die Legierungen des Eisens;* [Classification of the known alloys of iron].—Eisenhüttenm. Inst. Aachen, Mittlngn., Vol. IV, 1911; pp. 1-7; $4.20.

Paglianti, P.—*Della influenza del silicio sulle proprietà del ferro omogeneo;* [Influence of silicon on the properties of homogeneous iron].—Met'l'gia Ital., April,1912; pp. 231-254*; 65c.

Pick, W., and W. Conrad.—*La fabrication du ferro-silicium à haute teneur au four électrique;* [Manufacture of high-grade ferro-silicon in the electric furnace]. Rev. de Métal'gie, May,1912; p. 362-397*; $1.15.

Pitaval, R.—*Les exportations françaises de produits électrométallurgiques;* [French exports of electrometallurgic products].—Jnl. du Four Electriq., Feb.15,1912, p. 73; 1000 w; 35c.

Pitaval, R.—*Revue des industries électrochimiques et électro-métallurgiques;* [Progress in electrochemistry and electrometallurgical industries, 1911].—Jnl. du Four Electriq., Jan.1,1912; p. 1; 2000 w; 35c. Also in Soc. Amicale d. Mineurs de Douai; Bull.; March10, p. 154-160; March25, p. 168—; 50c.

Ruer, R. and E. Schüz.—*Das System Nickel-Eisen;* [The system nickel-iron].—Eisenhüttenm. Inst. Aachen, Mittlngn. f. 1911; pp. 7-8; 154-160*; $4.20.

Slawik, P.—*Rasche Methode zur Bestimmung des Mangans im Ferrowolfram;* [Rapid estimation of manganese in ferro-tungsten].—Chemiker Ztg., Jan.27,1912; p. 106; 500 w; 30c.

Slawik, P.—*Einfache Methode zur Vanadinbestimmung im Ferrovanadin;* [Simple method of estimating vanadium in ferro-vanadium].—Chemiker Ztg., Feb.13, 1912, p. 171; 500 w; 30c.

Slocum, C. V.—*Titanium in Iron and Steel.*—Amer. Electrocheml. Soc., Trans., Sept.,1911; 2000 w; 50c.

Abstract in Met'g'l & Cheml. Engg., Oct., 1911, p. 529; 2000 w; 35c. Also in Cheml. Engr., Oct.,1911, p. 420; 1200 w; 35c. Also in Mining & Engg. World, Dec. 23, 1911, p. 1260; 1100 w; 10c.

Also in Italian in Rassegna Mineraria, Dec.11, p. 274; 1600 w; 35c.

Venator, Wm.—*Ueber Verbesserung des Gusseisens durch Titan;* [Improvement of cast iron by addition of titanium].—Giesserei Ztg., Dec.1,1911, p. 713; Dec.15, p. 747; 4000 w; 50c.

Venator, W.—*Ueber die Verwendung von Ferrolegierungen im Eisenhüttenwesen;* [The use of ferro-alloys in siderurgy].—Chemiker Ztg., Dec.26,1911, p. 1427; 1200 w; 35c.

MSI.—*Production de l'acier au molybdène au four électrique;* [Production of molybdenum steel in the electric furnace].—Rev. Ind'le du Centre, May4,1912; p. 10; 1000 w; 35c.

Ch. R.—*Wolfram in der Stahlfabrikation;* [The use of tungsten in the manufacture of steels].—Eisen Ztg., Apr.27,1912; p. 297; 1800 w; 35c.

———. *Ferro-Silicon Prices in* 1911-1912.—Iron Age, Feb.8,1912; p. 368; 500 w; table; 30c.

———. *La fusion au four électrique du ferro-manganèse;* [Smelting of ferro-manganese in the electric furnace].—Jnl. du Four Electriq., Apr.15,1912; p. 176; May1, p. —; 2500 w; 50c.

———. *Smelting Chromiferous Iron Ore* [in Greece and Cuba].—E. & M. J., March 16, p. 547; 500 w; 25c.

———. *Titan im Stahl;* [Titanium in steels].—Eisen Ztg., Jan.20,1912; p. 42; 1200 w; 35c.

———. *Vanadium Stahl;* [Vanadium and its use in steel].—Centralbl. d. Hütten & Walzwerke, Jan.25,1912; p. 44; Feb.5, p. 63; 2500 w; 35c.

TIN-PLATE

See also under Tin.

———. *The German Tinplate Industry;* [Translated from Stahl & Eisen, March21].—Mng. Jnl., Apr.20,1912; p. 399; 1500 w; 35c.

———. *Welsh and American Tinplate Costs and Prices.*—Iron & Coal Trades Rev., March8,1912; p. 383; 1500 w; 30c.

GALVANIZED IRON

See under Zinc.

MICROSTRUCTURE; FERRO-MINERALOGY

See also Metallography, in Chapter XI.

Arthur, W. and W. H. Walker.—*Struc-*

ture of Galvanized Iron.—Jnl. of Ind'l & Engg. Chemy., June,1912; p. 397; 1600 w*; 65c.

Arnold, J. O., and L. Aitchison.—*Notes on the Solubility of Cementite in Hardenite.*—Iron & Steel Inst., Jnl.; May,1912; 7 pp; 7 plates; 50c. Reprint in Iron & Coal Trad. Rev., May10, p. 738; p. 722; 2000 w*; 45c. Abstract in Engnrg., May24, p. 713; 1000 w*; 35c.

Arnold, J. O., and A. A. Read.—*The Chemical and Mechanical Relations of Iron, Vanadium and Carbon.*—Iron & Steel Inst., Jnl.; May,1912; 15 pp*; 50c. Reprint, with discussion in Iron & Coal Trade Rev., May 10, p. 722; p. 740; 5000 w*; 45c. Also in Engnrg., June7, p. 784; 3000 w; 35c.

Aston, Jas.—*Malleable Cast Iron.*—Wisconsin Engr., May,1912; p. 341; 5000 w*; 30c.

Belaiew, N. T.—*Sur la cristallisation et structure des aciers refroidis lentement;* [Crystallization and micro-structure of slow-recooled steels].—Rev. de Métal'gie, May,1912; pp. 321-342*; $1.15.

Bullens, D. K.—*Mechanism of the Formation of Troostite.*—Met. & Cheml. Engg., April,1912; p. 205; 2000 w*; 35c.

Calian, J.—*La formation de l'osmondite dans les aciers hypo-eutectiques;* [Formation of osmondite in hypo-eutectic steels].—Rev. de Métallurgie, March,1912; pp. 187-194*; $1.15.

Edwards, E. T.—*Recognizing Alloy Steels by Ingot Structure;* [Visual vs. laboratory methods].—Iron Age, Feb.15,1912; p. 399; 2500 w*; 30c.

Freud, B. B. and others.—*White Iron Inside of Grey Iron.*—Cheml. Engr., March, 1912; p. 116; 1000 w*; 35c.

Goerens, P. and H. Meyer.—*Bestimmung der Umwandlungslinie des gamma-Eisens in beta-Eisen bezw. alpha-Eisen;* [Determination of the point of transformation of gamma-iron into beta-iron and into alpha-iron].—Eisenhüttenm. Inst. Aachen. Mittlngn., Vol. IV, 1911; pp. 102-107; $4.20.

Hatfield, W. H.—*Die physikalische Chemie der Ausfällung von freiem Kohlenstoff in Eisenkohlenstofflegierungen;* [Physical chemistry of the precipitation of free carbon in iron-carbon alloys; from Roy. Soc., Proc; Vol. 85, 1911].—Metallurgie, Apr.22, 1912; p. 278; 1500 w; 45c.

Howe, H. M.—*The Upward Concentration of Kish by Flotation;* [Behavior of graphitic carbon in melting cast iron].—Met. & Cheml. Engg., June,1912; p. 359; 1800 w*; 35c.

Howe, H. M.—*The Life History of Cells and Grains in Steel.*—Internat. Zts. f. Metallogr., Oct.,1911, p. 13-25*; 95c.

Joisten, A.—*Einfluss der thermischen Behandlung auf die Korngrösse des Eisens;* [Influence of thermic treatment on the coarseness of grain of iron].—Eisenhüttenm. Inst. Aachen, Mittlngn.; Vol. IV, 1911; pp. 176-178; $4.20.

Kinder, H.—*Ueber Kohlenstoffabscheidung in Hochofensteinen;* [Separation of carbon in the blast-furnace].—Stahl & Eisen, Feb.8,1912, p. 231; 600 w; 75c.

Smith, S. W. J. and others.—*The Magnetic Transition Temperature of Cementite;* [Temperature at which ferromagnetism is lost; read to Physical Soc.; abstract].—Electrician, Feb.9,1912; p. 730; 1000 w*; 35c.

Steinberg, S.—*Influence du recuit sur la microstructure de l'acier forgé;* [Influence of reheating on the microstructure of forged steel; French abstract from Soc. de Métallurgie Russe, Jnl., 1911].—Rev. de Métal'gie, May,1912; p. 227; 500 w; $1.15.

Smits, A.—*Ueber das System Eisen-Kohlenstoff;* [The iron-carbon system in siderurgy].—Zts. f. Elektrochemie, Jan.15,1912, p. 51; 1600 w*; 40c.

Smits, A.—*Ueber das System Eisen-Kohlenstoff;* [The system carbon-iron].—Zts. f. Elektrochemie, May15,1912; p. 363; 3500 w*; 40c.

Wark, N. J.—*Ueber die Polyederstruktur in Eisen-Kohlenstoff Legierungen;* [The martensite-cementite border and the "polyeder" structure of the carbon-iron alloys].—Metallurgie, Dec.8,1911, p. 731-737*; 50c.

Winter, H.—*Mitteilungen über die Metallforschung im Jahre* 1911; [Progress in metallo-mineralogy of iron and steel in 1911].—Glückauf, March23,1912; p. 468; 3500 w; 50c.

———. *Metallographie, unter besonderer Berücksichtigung des Giessereifaches; IV* [Metallography for iron founders; IV].—Eisen Ztg., Jan.13,1912; p. 21; 2000 w; 35c.

CHEMISTRY
(OF IRON ORES, IRON AND STEELS)

See also "Assaying and Chemistry," Chapter 11.

Bauer, O., and E. Deiss.—*Probenahme und Analyse von Eisen und Stahl;* [The sampling and analysis of iron and steel].—Berlin, 1912; pp. 258; 128 figs.; $3; (book).

Boyle, J. J.—*Determination of Manganese in Steel.*—Jnl. of Ind'l & Engg. Chem'y, March,1912, p. 202; 600 w; 65c.

Cain, J. R.—*The Determination of Chromium and Its Separation from Vanadium in Steels.*—Jnl. of Ind'l & Engg. Chem'y, Jan., 1912, p. 17; 2000 w; 65c. Abstract in Mining & Engg. World, Aug.3, p. 200; 400 w; 10c.

Cain, J. R. and D. J. Demarest.—*A New Method for the Determination of Vanadium* [In steels].—Jnl. of Ind'l & Engg. Chem'y, April,1912; p. 249; p. 256; 2100 w; 65c.

Cain, J. R. and J. C. Hostetter.—*A Rapid Method for the Determination of Vanadium in Steels, Ores, etc., based on its Quantitative Inclusion by the Phospho-Molybdate Precipitate.*—Jnl. of Ind'l & Engg. Chem'y, April,1912; p. 250; 6000 w*; 65c.

Davis, R. S.—*Method of Analysis for Wulfenite Ores and Ferro-Boron.*—Mining & Engg. World, June1,1912; p. 1137; 1200 w; 10c.

Delbarre, F.—*Etude sur les méthodes de récherche et de dosage du vanadium;* [Study of the various methods of detecting and estimating vanadium].—Bull. Techniq. du Nord, Feb.-March,1912; p. 25-35; 4000 w; 75c.

Demarest, D. J.—*The Bismuthate Method for Manganese.*—Jnl. of Ind'l & Engg. Chem'y, Jan.,1912, p. 19; 600 w; 65c.

Erhard, G.—*Der Laborant in der Eisengiesserei und die Untersuchung des Roheisens und der übrigen Materialen nach erprobten analytischen Methoden;* [Laboratory guide for the iron foundry, and the examination of pig iron and other materials by approved analytic methods].—Dresden, 1912; pp. 83 & 25*; $1.25 (book).

Fieber, R.—*Rasche und genaue Bestimmung des Wolframs im Ferro-Wolfram;* [Rapid and accurate estimation of tungsten in ferro-tungsten].—Chemiker Ztg., March26,1912; p. 334; 500 w; 35c.

Garratt, F.—*The Rapid Determination of Vanadium in Steel.*—Jnl. of Ind'l & Engg. Chem'y, April,1912; p. 257; 700 w; 65c.

Grzeschik, Theo.—*Praxis im Giesserei-laboratorium;* [Practice in the foundry laboratory of Gebr. Stork & Co., Hengelo, Holland].—Giesserei Ztg., March15, 1912; p. 169; April1, p. 209; May15, p. 312; June1, p. 349; July1, p. 407; 8000 w*; 95c.

Johannsen, O.—*Ueber Staubbestimmung in Gichtgas;* [Estimation of dust in flue gases; report of chemical committee of Ver. Deu. Eisenhüttenleute].—Stahl & Eisen, Jan.4,1912, p. 16; 2500 w; 75c.

Kantschew, K.—*Eine kritische Untersuchung auf dem Gebiete der Wolfram- und Wolframchromverbindungen;* [New titration method, and critical notes on, analysis of tungsten and tungsten-chrome compounds; brief abstract of paper read to 2d Mendeléyevf Congress, St. Petersburg, Dec.,1911].—Chemiker Ztg., Feb.20, 1912; p. 198; 250 w; 25c.

Kohout, J. F.—*A Colorimetric Method for the Determination of Carbon in Iron and Steel.*—Jnl. of Ind'l & Engg. Chem'y, May, 1912; p. 378; 500 w; 65c.

Ledebur, A.—*Leitfaden für Eisenhütten-Laboratorien;* [Guide for iron and steel-works laboratories].—Brunswick, 1911 (9th edition); pp. 176*; $1.75 (book).

Orthey, M.—*Bestimmung des Kohlenstoffs im Nickel;* [Estimation of carbon in commercial nickel].—Giesserei Ztg., Apr. 15,1912; p. 237; 2000 w; 40c.

Ridsdale, C. H. and N. D.—*Mechanicalized Methods of Analysis;* [Read to Cleveland Instn. of Engrs.; abstract].—Iron & Coal Trades Rev., Feb.23,1912, p. 288; 1000 w*; 30c.

Robinson, F. W.—*Determining Carbon in Iron and Steel;* [Read to Amer. Electrochem. Soc., abstract].—Iron Age, May9, 1912; p. 1162; 1000 w; 30c.

Schäfer, W. and E. Corleis.—*Ueber die Probenahme von Rohstoffen und Zwischenerzeugnissen auf den Hüttenwerken;* [Sampling of raw materials and intermediate products at smelters; report of committee of chemists of Ver. Deu. Einsenhüttenleute].—Stahl & Eisen, Jan.11,1912, pp. 53-58; 5000 w; 75c.

Slawik, P.—*Rasche Methode zur Bestimmung des Mangans im Ferrowolfram;* [Rapid estimation of manganese in ferro-tungsten].—Chemiker Ztg., Jan.27,1912; p. 106; 500 w; 30c.

Slawik, P.—*Einfache Methode zur Vanadinbestimmung im Ferrovanadin;* [Simple method of estimating vanadium in ferro-vanadium].—Chemiker Ztg., Feb.13,1912, 171; 500 w; 30c.

Stanichitch.—*Dosage colorimètrique rapide du manganèse dans les fontes et aciers au moyen du persulfate d'ammonium;* [Colorimetric estimation of manganese in pig-iron and steels by means of ammonium persulfate].—Rev. de Mét'l'gie, Dec.,1911, p. 891; 1000 w; $1.15.

Wüst, F.—*Verfahren zur Bestimmung des Gesamtkohlenstoffes in Eisenlegierungen;* [Method of estimating total carbon in iron compounds].—Eisenhüttenm. Inst. Aachen, Mittlngn; Vol. IV, 1911; pp. 107-109; $4.20.

———. *Laboratorium und Laboratoriumspraxis;* [Foundry laboratory and laboratory practice].—Eisen Ztg., May25,1912; p. 367; June1, p. 400; June8, p. 420; June 15, p. —; 6000 w; 80c.

———. *Methods of Analysis Used in the Laboratories of the Armour Institute of Technology; II: Iron Ore Analysis.*—Chemi. Engr., May,1912; p. 209; 1800 w; 35c.

PROPERTIES; TESTING; CORROSION

Archbutt, L.—*The Corrosion of Iron and the Protection of Structural Iron-Work;* [Read to Derby Soc. of Engrs.].—Engnrg., June7,1912; p. 786; June14, p. 824; 10,000 w*; 50c.

Arndt, K.—*Das Rosten des Eisens unter Schutzanstrichen;* [The rusting of iron under protective coatings].—Zts. f. Elektrochemie, Apr.1,1912; p. 233; 750 w; 40c.

Arnold, J. O.—*The Influence of Carbon on the Corrosion of Steel;* [Report of committee of Brit. Asso. Adv. of Sci.; abstract].—Engg. Record, Apr.20,1912; p. 426; 1800 w; 20c.

Bullems, D. K.—*The Brinell Test for Automobile Steel.*—Iron Age, Jan.4,1912, p. 7; 2500 w*; 65c.

Campbell, L. J.—*Corrosion of Iron and Steel;* [Discusses Cushman's paper before Amer. Iron & Steel Inst., May,1912].—Iron Trade Rev., June6,1912; p. 1240; 2100 w; 20c.

Chappell, C.—*The Influence of Carbon on the Corrodibility of Iron.*—Iron & Steel Inst., Jnl; May,1912; 25 pp*; 50c. Abstract in Iron & Coal Trades Rev., May10, p. 745; 1000 w*; 45c. Also in Engnrg., June21, p. 854; 7500 w*; 35c.

Charls, G. H.—*Real Purity in Iron;* [Reviews effects of foreign elements; [read to Natnl. Corrugated Culvert Asso.; abstract].—Iron Trade Rev., Jan.25, 1912, p. 238; 500 w; 20c. Abstract in Engg. Record, Apr. 13, p. 413; 500 w; 20c.

Cone, E. F.—*German vs. American Steel;* [Comparison of stern-fame castings for SS. Princess Irene].—Iron Age, March28,1912; p. 789; 500 w*; 30c.

Cushman, A. S.—*Corrosion of Steel and its Prevention;* [Read to Amer. Iron & Steel Inst., May,1912].—Iron Age, May23, 1912; p. 1278; 4000 w*; 30c. Also in Iron Trade Rev., May23, p. 1118; 2700 w*; 20c.

Fleming, W. R.—*Wrought Iron, Steel and Corrosion.*—Iron Age, March14,1912; p. 666; 2700 w*; 30c.

Friend, J. N., J. L. Bentley and W. West.—*The Corrosion of Nickel, Chromium and Nickel-Chromium Steels;* and, *The Mechanism of Corrosion.*—Iron & Steel Inst., Jnl; May,1912; pp. 12; 50c. Abstracts in Iron & Coal Trades Rev., May10, p. 742; p. 743; 6000 w*; 45c. Also in Engnrg., May 24, p. 714; May31, p. 753; 6000 w*; 50c. Also in Iron Age, May30, p. 1344; 2800 w; 30c.

Italian abstract in Rassegna Mineraria, May11, p. 267; 2000 w; 35c.

Hempel, —. *Das Rosten des Eisens;* [The rusting of iron; review of recent studies].—Kohle & Erz, Apr.8,1912; p. 344; 1000 w; 35c.

Howard, Jas. E.—*Limit of Endurance of Steel Rails Reached?* [Report of U. S. Bur. of Standards expert to Interstate Commerce Commission on Lehigh wreck].—Iron Trade Rev., Feb.8,1912; p. 355; 500 w*; 20c.

Liebreich, E. and F. Spitzer.—*Ueber den Einfluss von Anstrichen auf das Rosten des Eisens;* [Influence of paints or preservative coatings on the rusting of iron].—Zts. f. Elektrochemie, Feb.1,1912; p. 92-99*; 40c.

Sauveur, Alb.—*The Structural Composition and Physical Properties of Steel.*—

Franklin Inst., Jnl., May,1912; p. 499-508; 65c.

Strange, H. B.—*Steel Specifications from the Commercial Point of View;* [Read to Junior Instn. of Engrs.; abstract].—Iron & Coal Trades Rev., Dec.22,1911, p. 1020; 5000 w*; 30c.

Thompson, G. W.—*Notes on the Corrosion of Iron and Steel and Its Prevention.*—Amer. Inst. Cheml. Engrs., Trans., Vol. III; pp. 222-236.

Venator, Wm.—*Ueber die physikalischen und chemischen Eigenschaften des Gusseisens;* [Physical and chemical properties of cast iron].—Giesserei Ztg., May1,1912; p. 282; 2700 w; 35c.

Watts, O. P.—*Iron Corrosion Investigations;* [By sulphuric acid; effects of various addition agents; read to Amer. Electrochemi. Soc., Apr.,1912].—Iron Age, May 30,1912; p. 1346; 2500 w; 30c. Also in Cheml. Engr., June, p. 248; 2000 w; 35c.

West, T. D.—*Results of a Series of Chillable-Iron Tests;* [Read to Amer. Soc. of Mechl. Engrs.; abstract].—Iron Trade Rev., June13,1912; p. 1280; 5000 w*; tables; 20c. Also in Castings, June, p. 76; 5000 w*; 25c.

Wüst, F. and H. L. Felser.—*Der Einfluss der Saigerungen auf die Festigkeit des Flusseisens;* [The influence of liquation on the tensile strength of cast iron].—Eisenhüttenm. Inst. Aachen, Mittlngn.; Vol. IV, 1911; pp. 109-130; $4.20.

Amer. Soc. for Testing Materials.—[*Proceedings and abstracts of committee reports at annual meeting, New York City, March,* 1912; standard steel rails, automobile steel, re-rolled reinforced bars, structural nickel steel and girder rails, steel castings, etc.].—Iron Age, April4,1912; p. 846; 4000 w; 30c. Also in Iron Trade Rev., Apr.4, p. 757; Apr. 11, p. 811; 10,000 w*; 30c.

National Tube Co.—*Corrosion Tests of Wrought Iron and Steel.*—Practl. Engr., June15,1912; p. 621; 1800 w*; 25c.

———. *A New Theory Considered for Cast-Iron Testing.*—Castings, May,1912; p. 37; 2100 w*; 25c.

SPECIAL IRONS AND STEELS

See also Ferro-Alloys.

Aston, Jas.—*Malleable Cast Iron and its Ferrous Competitors.*—Castings, June,1912; p. 72; 3600 w*; 25c.

Baraduc-Miller, L.—*Sur l'emploi du carborundum dans la fabrication des aciers spéciaux;* [Use of carborundum in the manufacture of special steels].—Rev. de Mètall'gie, Sept.,1911, pp. 672-707*; $1.15. English abstract in Cheml. Engr., Dec., 1911, p. 511; 1500 w; 35c. Italian abstract in Rassegna Mineraria, March11,1912; p. 146; 1800 w; 35c.

Belaiew, N. T.—*Damast;* [Properties and manufacture of Damascus steel; abstract of papers in "Metallurgie"].—Stahl & Eisen, Jan.18,1912, p. 114; 1000 w; 75c.

Campbell, W. and H. B. Allen.—*Heat Treatment of a Nickel Steel;* [read before Amer. Soc. for Testing Materials, June, 1910.—Columbia Univ. School of Mines Quar'ly, Nov.,1911; pp. 72-83*; 65c.

Cubillo, General L.—*Manufacture and Treatment of Steel for Guns.*—Iron & Steel Inst., Jnl.; May,1912; 36 pp*; 50c. Reprint in Engnrg., May17, p. 673; 10,000 w*; 35c. Also in Iron & Coal Trades Rev., May10, p. 723, p. 747; 10,500 w*; 45c.

Edwards, E. T.—*Composition of High-Speed Tool Steels;* [Tests of superior group].—Iron Age, Apr.18,1912; p. 957; 4000 w; 30c.

Friend, J. N., J. L. Bentley and W. West.—*The Corrosion of Nickel, Chromium and Nickel-Chromium Steels.*—Iron & Steel Inst., Jnl.; May,1912; pp. 12; 50c. Abstract in Iron & Coal Trades Rev., May10, p. 742; 3000 w*; 45c. Also in Engnrg., May24, p. 714; May31, p. 753; 6000 w*; 50c. Also in Iron Age, May30, p. 1344; 2800 w; 30c. Italian abstract in Rassegna Mineraria, May11, p. 267; 2000 w; 35c.

Hadfield, W. H.—*Cast Iron in the Light of Recent Research.*—London, 1912; pp. —; 164 figs. $3 (book).

Herbert, Edw. G.—*The Influence of Heat Upon Hardened Tool Steels, With Special Reference to the Heat Generated in Cutting Operations.*—Iron & Steel Inst., Jnl., May,1912; 22 pp*; 50c. Reprint with discussion in Iron & Coal Trades Rev., May10, p. 724; p. 736; 6000 w*; 45c. Also in Engg. Rev., June, p. 509; July; 6000 w; 50c. Abstract in Iron Age, June13, p. 1465; 4000 w*; 35c. Also in Engnrg., June 21, p. 85; 6000 w*; 35c.

Hilpert, S., E. Colver-Glauvert and W. Mathesius.—*Ueber die magnetischen Eigenschaften von Nickel- und Manganstählen;* [Magnetic properties of nickel- and manganese-steels].—Stahl & Eisen, Jan.18,1912, p. 96-103*; 75c. Also in Zts. f. Elektrochemie, Jan.15.1912, p. 54; 4000 w; 40c.

Mathesius, W.—*Studie über die magnetischen Eigenschaften von Mangan- und Nickelstahl;* [Studies on the magnetic properties of manganese-steel and nickel-steel].—Berlin Techn. Hochschule dissert; 1911; 30 pp.; 25 figs; 75c.

Matthews, J. A.—*Composition of High Speed Tool Steel;* [Discusses Edwards' article].—Iron Age, May2,1912; p. 1098; 1800 w; 30c.

Palmer, Wm. P.—*Improvement of Quality in Steel Wire Manufacture;* [Improvements in practice of American Steel & Wire Co.].—Iron Age, Jan.4,1912, p. 41; 2000 w; 65c.

Pilkington, H.—*Wrought Iron and Mild Steel;* [Read to W. of Scotland Iron & Steel Inst., abstract].—Iron & Coal Trades Rev., March22,1912; p. 463; 3000 w*; 30c.

Rèid, Chas. H.—*The Function of Wrought Iron [Versus steel].*—Iron Trade Rev., Dec. 28,1911, p. 1132; 1000 w; 25c. 35c.

Robinson, T. W.—*Improvement in the Quality of American Steel Rails.*—Iron Age, Jan.11,1912, p. 132; 1500 w; 30c.

Schön, Fr.—*Die Schule des Werkzeugmachers;* [School for the tool and tool-steel maker, with special reference to tempering and high-speed steel].—Hannover, 1911; 156 pp; $1.25 (book).

Scott, E. K.—*Steel for Permanent Magnets.*—Iron & Coal Trades Rev., March8, 1912, p. 377; 1000 w; 30c.

Sperry, E. S.—*Kind of Cast Iron Used in Making Moulds;* [from Brass World].—Mechl. World, Dec.8,1911, p. 269; 500 w.;

Stromeyer, C. E.—*The Reliability of Mild Steel;* [From Manchester Steam Users' Asso. annual report, 1911].—Australian Mng. Standd., Feb.15,1912; p. 149; 3200 w; 35c.

Thaler, H.—*Nickel-Roheisen;* [Nickel pig-iron; preparation and properties;.—Giesserei Ztg., Feb.1,1912; p. 73; Mar.15, p. 172; 2500 w*; 50c.

Towlson, J. T.—*Hints on the Working of Tool Steel.*—Mechl. World, Apr.15,1912; p. 161; 2500 w; 35c.

Whitney, A. W.—*Control of Mixtures for*

Cast-Iron Carwheels.—Iron Trade Rev., March14,1912; p. 599; 2000 w*; 20c.

Wilkins, Wm.—*The Improvement of Charcoal Pig-Iron.*—Iron Age, Feb.8,1912; p. 366; 1200 w; 30c.

"Ironkem."—*Mixtures for Chilled Car Wheels;* [Discusses advantages of old-time charcoal iron].—Iron Age, May16,1912; p. 1206; 3000 w*; 30c.

———. *Die Herstellung von dünnwandigem Grauguss;* [Production of thin gray iron].—Eisen Ztg., Dec.9,1911, p. 887; 1200 w; 35c.

———. *Mayari Steel: Its Properties and Uses;* [Chrome-nickel steel.—Iron Age, Jan. 4,1912, p. 69; 2800 w*; 65c.

———. *Verfahren zur Herstellung von Chromnickelstahl;* [Chrome-nickel-steel process of Homécourt works, France].—Montan Ztg., Jan.1,1912, p. 6; 600 w; 35c.

HISTORICAL

Bell, Sir Hugh—*Notes on a Bloom of Roman Iron Found at Corstopitum (Corbridge), Northumberland.*—Iron & Steel Inst., Jnl., May,1912; pp. 13*; 50c. Abstract in Engnrg., May10, p. 640; 3500 w*, 35c. Also in Iron & Coal Trades Rev., May 10, p. 733; 3500 w*; 45c.

Abstract, in Italian, in Rassegna Mineraria, July1, p. 8; 1500 w; 35c.

Graves, H. G.—*Further Notes on the Early Use of Iron in India.*—Iron & Steel Inst., Jnl., May,1912; pp. —; 50c. Reprint in Engnrg., May10,1912; p. 644; 2100 w*; 35c. Also in Iron & Coal Trades Rev., May 10, p. 731; 2100 w*; 45c.

Hadfield, Sir R. A.—*Shinhalese Iron and Steel of Ancient Origin.*—Iron & Steel Inst., Jnl; May,1912; 40 pp*; 50c. Abstract in Iron & Coal Trades Rev., May10, p. 725; 12000 w*; 45c. Also in Engnrg., May31, p. 745; 12,000 w*; 35c.

Hadfield, Sir Rob. A.—*The World's Progress in Metallurgy;* [Ancient iron and steel; unsolved problems; alloys; tensile strength and temperature].—Iron Age, Jan.4,1912, p. 54; 3500 w*; 65c.

Martell, Paul.—*Zur Geschichte der Eisengiesserei im 16 Jahrhundert;* [History of iron founding in Germany in the 15th century].—Giesserei Ztg., Apr.15,1912; p. 249; May1, p. 285; May15, p. 319; 5500 w; 75c.

Turner, T.—*Notes on Some Remains of Early [Roman] Iron Manufacture in Staffordshire.*—Iron & Steel Inst., Jnl., May, 1912; 10 pp*; 50c. Abstract in Engnrg., May10, p. 643; 2000 w*; 35c. Also in Iron & Coal Trades Rev., May10, p. 735; 2100 w*; 45c.

Wolff, Theo.—*Eisen und Eisengewinnung im Altertum;* [Iron and the iron industry among the Egyptians and in antiquity].—Bergbau, March14,1912; p. 153; March21, p. 168; 4000 w; 50c.

———. *Pig-Iron Cost in the '60s;* [An Ohio furnace showing $6.75 per ton loss].—Iron Age, May2,1912; p. 1085; 500 w; 30c.

MISCELLANEOUS

Beyer, D. S.—*Safety Provisions by the U. S. Steel Corporation.*—Smithsonian Instn., Annl. Rep. f. 1910; 1911; pp. 211-231*; $1.00.

Heym, W.—*Moderne maschinelle Ausrüstungen in amerikanischen Stahlwerken;* [Modern machinery in the iron mining and steel industries].—Kali Erz & Kohle, March25,1912; p. 303; Apr.15, p. 375; May 5, p. 447; 7000 w; 80c.

Hillringhaus, Aug.—*Die wirtschaftliche Lage der Giessereien; Ein Rückblick und ein Ausblick;* [Industrial status of the foundry; a retrospect, and aspect for the future].—Giesserei Ztg., Apr.1,1912; p. 218; 4500 w; 45c.

Jeans, H.—*The Control of Prices in the Export Steel Trade;* [In Britain, America and Germany; read to Staffords. Iron & Steel Inst.].—Iron & Coal Trades Rev., March2,1912; p. 498; 6000 w; 35c.

Koon, S. G.—*Hours and Intensity of Steel Works Labor.*—Iron Age, Feb.1,1912, p. 312; 1200 w; 30c.

McRae, F. J.—*U. S. Steel Corporation Report of Earnings;* [Report to Stanley congressional investigating committee].—Iron & Coal Trades Rev., March22,1912; p. 452; 1000 w; 30c.

Meesmann, —. *Die Entwickelung der deutschen Eisen- und Stahl-Berufsgenossenschaften in 25 Jahren;* [Development of the German iron and steel labor unions in 25 years].—Stahl & Eisen, Jan.4,1912; pp. 1-5; 75c.

Ross, Colin.—*Die Entstehung von Grosseisenindustrie an der deutschen Seeküste;* [The origin and advantages of the seacoast location of the German iron and steel industry].—Berlin, 1912; 111 pp; 4 figs; $1.50 (book).

Smith, H. K.—*Preliminary Report on the Cost of Production of Iron and Steel, Part II;* [Abstract report to President Taft].—Iron Age, Jan.25,1912, p. 257; 2400 w; 30c.

Verein Deutscher Eisenhüttenleute.—[*Abstracts of proceedings and papers, spring meeting,* 1911, *Düsseldorf;* in German].—Deu. Bergwerks Ztg., March26, 1912; p. 1; 5000 w; 35c.

Werndl, F.—*Die Roheisen-Selbstkosten in den Industriegebieten Südwestdeutschland, Niederrheinland-Westfalen und Oberschlesien;* [Diagnosis of the costs of pig-iron production in southwest Germany, in the Lower Rhine-Westphalia region and in Silesia].—Berg- & Hüttenm. Rundschau, Apr. 20,1912; p. 151; 6500 w; 35c.

———. *Accident Prevention in Steel Plants.*—Iron Age, Jan.4,1912, p. 30; 9000 w*; 65c.

———. *Eine Statistik über die Löhne in der Rheinisch-westfälischen Grosseisenindustrie;* [Statistics of wages in the Rhenish iron and steel industry].—Bergbau, Dec.29, 1911, p. 824; 1000 w; table; 35c. Also in Stahl & Eisen. Jan.18,1912, p. 117; 750 w; table; 75c.

———. *Exports of the Great Iron Countries;* [Editorial discussion of 1910 and 1911 figures for U. S., U. K. and Germany].—Iron Age, May2,1912; p. 1106; 2000 w; 30c.

———. *How Cambria Steel Co., Safeguards its Employes;* [Devices in iron and steel plants at Johnstown, Pa.].—Iron Trade Rev., June13,1912; p. 1269; 2100 w*; 20c.

———. *Jahresbericht pro 1911 über Giessereiroheisen;* [Annual review of the world's foundry-pig industry for 1911].—Eisen Ztg., Jan.13,1912; p. 25; 1400 w; 35c.

———. *Iron and Steel Industry;* [Review of London Board of Trade volume covering world's ore, pig-iron and iron and steel industry up to Jan.1,1911].—Engg., Dec.22,1911, p. 835; 1200 w; 35c.

———. *The Three Greatest Iron Producing Countries;* [Pig-iron consumption in U. S., U. K., and Germany].—Iron Age, Jan. 4,1912, p. 86; 1000 w; 65c.

Furnace and Heat Treatment

TEXT-BOOKS; GENERAL TREATISES

Allen, H.—*Metallurgical Manual of Iron and Steel; Their Structure, Constitution and Production.*—London, 1912; 374 pp.*; $2 (book).

Brearley, H.—*The Heat Treatment of Tool Steel.*—London, 1911; 152 pp*; $3; (book).

Doumer, Paul, and others.—*La métallurgie du fer;* [The Metallurgy of Iron].—Paris, 1911; pp. —; (book).

Brief review in Métallurgie, Jan.31,1911, p. 69; 200 w; 35c.

Harbord, F. W., and J. W. Hall.—*The Metallurgy of Steel.*—Philadelphia, 1911 (4th edition); 2 volumes; $12; (book).

von Jonstorff, H. Jüptner.—*Das Eisenhüttenwesen;* [Metallurgy of iron and steel; review of development and its industrial and sociological significance].—Leipzig, 1911; 224 pp.; 123 figs.; $2.50 (book).

Ledebur, A.—*Leitfaden für Eisenhütten-Laboratorien;* [Guide for iron and steel-works laboratories].—Brunswick, 1911 (9th edition); pp. 176*; $1.75 (book).

Lelong, A., and E. Mairy.—*Traité Pratique de Fonderie;* [Manual of Foundry practice; iron, malleable iron, steel, copper and alloys].—Paris, 1912; 2 volumes; pp. 659, 512; (book).

Lipin, W.—*Metallurgy of Pig-Iron, Iron and Steel;* [Vol. II: The Production of Iron and Steel from Pig-Iron and Ores; Production of Cement Steel and Malleable Castings (In Russian)].—St. Petersburg, 1911; 918 pp*; (book).

Osann, B.—*Lehrbuch der Eisen- und Stahlgiesserei;* [Textbook of iron and steel foundry practice].—Leipzig, 1912; pp. —; $5 (book).

Schön, Fr.—*Die Schule des Werkzeugmachers;* [School for the tool and tool-steel maker, with special reference to tempering and high-speed steel]—Hannover, 1911; 156 pp; $1.25 (booklet).

Sexton, A. H., and J. S. G. Primrose.—*The Principles of Iron Founding and Foundry Metallography.*—London, 1912; 338 pp; $2 (book).

Wachenfeld, H.—*Die Metall- und Eisengiesserei mit besonderer Berücksichtigung der Legierungen und Gattierungen für den Maschinenbau;* [The iron and metal foundry, with special reference to the alloys and mixtures for metal machinery].—Halle, 1911; 112 pp; 15 figs.; $1.75 (book).

INDIVIDUAL MILLS OR PLANTS

Estep, H. Cole.—*Gray-Iron Foundry Operating Economies;* [Rumely Co. works].—Iron Trade Rev., Feb.22,1912; p. 437; 3600 w*; 20c.

Estep, H. C.—*Neuzeitliche Graugiesserei in Indiana, U. S. A.;* [Modern gray-iron foundry of M. Rumley & Co., at Laporte, Ind.; from "Foundry," No. 5, 1911].—Giesserei Ztg., Nov.1,1911, p. 652; Nov.15, p. 687; Dec.1, p. 715; 3000 w*; 75c.

Hudson, J. J.—*Charcoal Iron by a New Process;* [Purification in special open-hearth furnace, Vulcan Co., Crum Lynne, Penn.].—Iron Age, Apr.18,1912; p. 962; 1500 w*; 30c. Also described in Iron Trades Rev., May2, p. 951; 500 w; 20c.

Laur, F.—*Beau type d'usine moderne, Homécourt;* [Plant and organization of the Homécourt iron and steel works, Est, France].—Echo d. Mines, Dec.4,1911, p. 1238; 1200 w; 35c.

Miles, J. B.—*New Dry-Blast Process for Iron Furnaces;* [Cooling after compression at Northern Iron Co. plant, Standish, N. Y.].—Iron Trade Rev., Apr.25,1912; p. 901; 2000 w*; 20c. Also in Iron Age, Apr. 25, p. 1022; 1500 w*; 30c. Also in Iron & Coal Trades Rev., Apr.26, p. 635; 1500 w*; 35c.

Pavlovf, M. A.—*Experiences in the Proper Dimensions and Laying-Out of a Martin Basic Furnace* [in Russian]. — Russian Met'g'l Soc., Jnl., 1910; No. 4; pp. 169-183*.

German abstract in Stahl u. Eisen, July 20,1911, p. 1183; 3000 w; plates; 75c.

English abstract in Met. & Chemi. Engg., Jan.,1912, p. 44; 1000 w; 35c. Also in Canadian Engr., Jan.25,1912, p. 219; 1500 w; 25c. Also in Iron & Coal Trades Rev., Jan.26, p. 138; 1000 w; 30c. Also in Mechl. World, May3, p. 213; 1000 w; 35c.

Raymond, R. W.—*The Excursion to Hawaii and Japan;* [Includes notes on Japanese steel plants].—Amer. Inst. Mng. Engrs., Bull. 61, Jan.,1912, pp. 1-102*; $1.15.

Richards, J. W.—*The Japan Excursion of the American Institute of Mining Engineers;* [Includes notes on Yawata imperial steel works].—Met. & Chemi. Engg., Jan.,1912, p. 15; 5000 w*; 35c.

Richarme, F.—*Four Martin pour moulages d'aciers et aciers spéciaux de l'usine de Tsaritsyne;* [Martin furnace for steel castings and special steels at the Tsaritsyne works, Russia].—Rev. de Mét'l'gie, Dec., 1911, pp. 882-890*; $1.15.

English abstract in Iron & Coal Trades Rev., Apr.12,1912; p. 568; 750 w; 35c. Also in Canadian Engr., May9, p. 649; 800 w; 25c.

Wang, Cho-Yang and Cheng-Fu.—*Notes on the Han-Yeh-Ping Iron & Coal Co., China.*—Columbia School of Mines Quar'ly. Jan.,1912; p. 165; 1000 w*; 65c. Reprint in Iron & Coal Trades Rev., March8, p. 375; 30c.

Associazone fra gli Industriali Metallurgici Italiani.—*The Metallurgic Industry in Italy; Description of Some of the Principal Works.*—Milan, 1911; 430 pp.*; $2.00.

———. *Alabama Cons. Coal & Iron Co. 2: Shelby Iron Co.; Shelby, Ala.*—Manfrrs. Record, Feb.22,1912; p. 102-103; 4000 w*; 65c.

———. *A Large Foundry for Light Castings;* [International Harvester Co. plant at Springfield, O.].—Iron Trade Rev., Jan.25, 1912, p. 2333; 2400 w*; 20c.

German abstract in Giesserei Ztg., Apr.1, p. 203; Apr.15; 2500 w*; 50c.

———. *A Modern Acid Open-Hearth Steel Foundry;* [Plant of Union Steel Casting Co., Pittsburgh].—Iron Trade Rev., Jan. 4,1912, p. 99; 3000 w*; 65c.

———. *A New Thin-Lined Blast Furnace;* [Detroit Iron & Steel Co., Detroit, Mich.].—Iron Age, Apr.18,1912; p. 970; 2500 w*; 30c. Also in Iron Trade Rev., Apr.18; p. 855; 2500 w*; 20c.

———. *A Self-Contained Steel Plant in Southern Ohio;* [Portsmouth Steel Co.'s works].—Iron Trade Rev., March28,1912; p. 691; 3500 w*; 20c. Also in Iron Age, March 28,1912; p. 765; 3000 w*; 30c.

———. *Blast Furnaces of the Rogers-Brown Iron Co.; Two New Stacks, Nos. 3 and 4;* [Buffalo, N. Y.].—Iron Trade Rev., Apr.11,1912; p. 797; 2000 w*; 20c.

———. *Cambria Steel Co.'s Motor-Driven Merchant Mills;* [Johnstown, Penn.].

—Iron Trade Rev., May30,1912; p. 1159; 2500 w*; 20c.

———. *Congrès du Nord et du Pas-de-Calais, Juin,* 1911; [Visits of the Nord & Pas-de-Calais Mining Congress to the Arbel and Fives-Lille steel works].—Soc. de l'Ind. Minrl. St. Etienne, C-R, Oct.,1911, pp. 557-568; 75c.

———. *Improvements at Nova Scotia Steel & Coal Co.'s Plant.*—Canadn. Engr., Feb.15,1912; p. 306; 1000 w; 25c.

———. *Inland Steel Co.'s New Blast Furnace;* [Indiana Harbor].—Iron Age, May9,1912; p. 1152; 1500 w*; 30c. Also in Iron Trade Rev., May9, p. 1000; 3000 w*; 20c.

———. *Iroquois Iron Co.'s New Blast Furnaces;* [Two 300-ton stacks at S. Chicago].—Iron Trade Rev., Jan.4,1912, p. 49-58*; 65c.

———. *Kalimati Meeting; General Description of Tata Iron & Steel Co., Ltd., Works, Sakchi, Bengal, India.*—Mng. & Geol Inst. of India, Trans., Jan.,1912; p. 196-208.

———. *The Tata Iron & Steel Co.'s Plant;* [Modern American-designed works at Sakchi, Bengal, India].—Iron Age, Apr.11,1912; p. 906; 3500 w*; 30c. Also in Iron & Coal Trades Rev., May3, p. 675; 3500 w*; 35c.

———. *Moderne Anlage zur Herstellung von Stahlguss im sauren Martinprozess;* [Modern steel castings plant by the Martin acid process; Union Steel Castings Co., Pittsburgh; from the "Foundry"].—Eisen Ztg., May25,1912; p. 376; Junel, p. 403; 1800 w; 50c.

———. *New Blast Furnace at the Works of the Barrow Hematite Steel Co., Ltd.*—Iron & Coal Trades Rev., Jan.19,1912; p. 85; 2000 w*; 30c.

———. *Opening of the New Plant of the American Infusion Steel Process Co.*—Cassier's Mag., March,1912; p. 62; 750 w*; 35c.

———. *Plate and Merchant Mills at Haselton, Ohio;* [New finishing plant of Republic Iron & Steel Co.].—Iron Age, Jan. 4,1912, p. 11; 1200 w*; 65c.

———. *Republic Iron & Steel Co.'s No. 4 Blast Furnace* [Haselton, Ohio].—Iron Trade Rev., Dec.28,1911, p. 1135; 1000 w*; 25c. Also in Iron Age, Dec.28, p. 1402; 1000 w*; 30c.

———. *Statistics of British Blast Furnaces for the Quarter Ended March* 31, 1912.—Iron & Coal Trades Rev., Apr.26, 1912; p. 655; tables; 35c.

———. *The Latest Thin-Lined Blast Furnace;* [American Steel & Wire Co.'s Central "D," Cleveland, Ohio].—Iron Age, Feb.1, 1912, p. 287, 2500 w*; 30c.

———. *The Cokerill Works, Seraing, Belgium.*—Engg. Mag., Feb.,1912; pp. 748-759*; 35c.

———. *The Manufacture of Malleable Iron Stove Plate;* [Beaver Dam, Wisconsin].—Iron Trade Rev., Feb.8,1912; p. 337; 2500 w*; 20c.

———. *The Minnesota Steel Co.'s. New Plant at Duluth.*—Iron Trade Rev., Feb.8, 1912; p. 349; 2100 w*; 20c.

———. *The Niles Tool Works New Foundry;* [Special cupola charging and crane facilities, Hamilton, Ohio].—Iron Age, May9,1912; p. 1145; 1600 w*; 30c.

BLAST FURNACE PRACTICE

See also under "Thermic Metallurgy," Chapter 11.

Baker, David.—*Thin-Lined Blast Furnace Construction.*—Iron Age, Dec.28,1911; p. 1400; 1000 w*; 30c. Abstract in Iron & Coal Trades Rev., Feb.2,1912; p. 167; 1000 w*; 30c. Also in Engg. Mag., March, p. 959; 1000 w*; 35c.

French abstract in Métallurgie, March13, p. 163; 800 w*; 35c.

Baker, David.—*Automatic Blast-Furnace Charging;* [Baker mechanical sequence controller].—Iron Age, April4,1912; p. 840; 1600 w*; 30c. Abstract in Iron & Coal Trades Rev., May24, p. 842; 1000 w*; 35c.

Breyre, Ad.—*Les asphyxies par les gaz des hauts-fourneaux;* [Gas asphyxiation in blast-furnaces, and review of such accidents in Belgium 1906-1911].—Annales d. Mines [Belgiq.), 1912, No. 1; pp. 65-156*; 95c.

English abstract in Iron & Coal Trades Rev., May17, p. 810; 2800 w*; 35c.

Carr, W. M.—*A Detachable Open-Hearth Furnace;* [1-ton and 2-ton sizes for steel castings].—Iron Age, March21,1912; p. 718; 750 w*; 30c.

Diehl, A. N.—*The Blast Furnace Regenerative Stove;* [Read to Engrs. Soc. of W. Penn.].—Iron Age, March7,1912; p. 580; 5000 w; 30c. Also in Iron & Coal Trades Rev., Apr.5, p. 528; 5000 w; 35c. Also in Engg. Mag., May, p. 265; 1800 w; 35c.

Edwards, G. E.—*The Metallization of Low-Grade Iron Ores;* ["Step" process of J. T. Jones for reducing iron ore at Iron Mt., Mich., without smelting gangue].—Mining & Engg. World, March9,1912; p. 553; 3000 w; 10c.

Friedrich, K. and A. Leroux.—*Arsenides;* [in German].—See under Thermic Metallurgy.

Gillhausen, W. G.—*Ueber die Stoff- und Wärmebilanz des Hochofens;* [Relation between charge, blast and fuel consumption in the blast furnace].—Eisenhüttenm. Inst. Aachen, Mittlngn.; Vol. IV, 1911; pp. 178-222*; $4.20.

Jones, J. T.—*The Jones Process for "Metallizing" Ore;* [Step process for reducing iron ore at Iron Mt., Mich., without smelting gangue].—Iron Age, Dec.14, p. 1305; 1100 w; 30c. Also in E. & M. J., Feb.24,1912; p. 400; 25c.

Kjellin, F. A.—*Ett bidrag till masugnsprocessens teori;* [Notes on the theory of progressive reactions in the blast-furnace].—Jernkontor. Annaler, Bihang; Jan.,1912; pp. 1-36*; 45c.

Küppers, A.—*Ein Beitrag zur Frage der Hochofenbegichtung;* [New automatic charging equipment for the blast furnace].—Stahl & Eisen, Apr.11,1912; p. 619; 1600 w*; 75c.

Levin, M.—*Ueber die direkte und indirekte Reduktion im Eisenhochofen;* [Direct and indirect reduction of iron in the blast furnace].—Metallurgie, Oct.8,1911, p. 606; 4500 w*; 50c. Author's abstract in Stahl & Eisen, Feb.8,1912, p. 232; 1600 w; 75c.

Luty, B. E. V.—*Blast Furnace Statistics for* 1911 *in U. S.*—Iron Trade Rev., Jan.4, 1912, p. 12; 2000 w; tables; 60c.

Pitaval, R.—*Les hauts fourneaux française au l'Janvier* 1912; [Statistics of blast furnaces in France, Jan. 1, 1912].—Echo d. Mines, Jan.15,1912; p. 50-52; 1000 w; tables; 35c.

Porter, J. J.—*Rational Valuation and Quality-Efficiency of Furnace-Stock;* [Valuing ore, coke and limestones for iron-making].—Amer. Inst. Mng. Engrs., Bull. 63; March, 1912; pp. 279-293; $1.15.

van Royen, H. J.—*Experimentelle Untersuchungen über das System Fe, FeO, C, CO und CO_2 und Betrachtungen über die chemischen Vorgänge im Hochofen vom Standpunkte der Affinitätslehre;* [The system Fe, FeO, C. CO and CO_2, and the chemical reactions in the blast furnace].—Bonn dissert; 1911; 96 pp*. (Thesis).

Schmidt, W.—*Die spezifische und Erstarrungs-Wärme des geschmolzenen Roheisens;* [The specific heat and heat of congelation of molten pig-iron].— Eisenhüttenm. Inst. Aachen. Mittlngn. f. 1911; pp. 91-94; $4.20.

Schury, G.—*Selbstkostenberechnung von flüssigem Eisen für eine Handelsguss-Giesserei;* [Costs of liquid iron for a commercial castings plant].—Giesserei Ztg., May 15,1912; p. 304; 2000 w; 45c.

Simmersbach, O.—*Coke Oven Gas in Open Hearth Furnaces;* [Results with mixed gases and coke gas alone; from Stahl & Eisen].—Iron Age, Feb.8,1912; p. 350; 3500 w; 30c.

Simmersbach, O.—*Verwendung von Koksofengas im Martinofen;* [Use of coke-oven-gas fuel in the Martin basic furnace; read to Ver. Deu. Eisenhüttenleute].—Ver. Deu. Ingr., Zts., Nov.4,1911, p. 1857; 1200 w; 50c. English abstract in Iron Age, Feb.8,1912, p. 350; 3500 w; 30c.

Zyromski.—*Observations sur la marche idéale du haut fourneaux;* [Theoretic reactions in the blast furnace; discussion before Nord & Pas-de-Calais Mining Congress, 1911].—Soc. de l'Ind. Minrl. St. Etienne, C-R., Oct.,1911, p. 574-580; 75c.

———. *Aplicación de los gases de los hornos de cok a los hornos Martín;* [Use of coke-oven gases in Martin furnaces in Belgium and Germany].—Ingeniería, May10, 1912; p. 153; 1000 w; 35c.

———. *Eight-Hour Blast Furnace Day with Seven Days to the Week;* [New plan of Cambria Steel Co].—Iron Age, Apr.25, 1912; p. 1045; 1800 w; 30c.

———. *Hochofenexplosion auf der Hütte Phönix;* [Explosion at the Phoenix blast furnace, Ruhr district, Prussia, Jan.,1912].—Stahl & Eisen, Jan.25,1912, p. 151; 750 w; 75c.

———. *Statistics of British Blast Furnaces for the Quarter Ended March* 31, 1912.—Iron & Coal Trades Rev., Apr.26, 1912; p. 655; tables; 35c.

SLAGS; FLUE DUST AND GAS

See also under "Briquetting," Chapter 13, for sintering and briquetting of dusts, etc. See also Briquetting under Iron-Ores and Mining.

See also under "Thermic Metallurgy," in Chapter 11, and "Wastes Disposition" in Chapter 13.

Blome, H.—*Beiträge zur Konstitution der Thomasschlacke;* [Constitution of Thomas basic phosphatic slags]. — Zentralbl. f. Kunstdünger Ind., May21,1912; p. 153; 1000 w; 35c.

Fleissner, H. — *Eisenhochofenschlacken, ihre Eigenschaften und ihre Verwendung;* [Blast-furnace slags, their properties and uses].—Halle, 1911; pp. —*; (book).

Extracts on slag-cement industry.—Stahl & Eisen, Feb.8,1912, pp. 224-231; 5000 w*; 75c. Notes on slag composition in Oestr. Zts. f. Berg- & H-wesen, Jan.20,1912; p. 29; Jan.27, p. 46; 8000 w*; 65c.

Gouvy.—*Utilization des gaz de hauts fourneaux;* [Utilization of blast-furnace waste gases; discussion before Nord & Pas-de-Calais Mining Congress, 1911].—Soc. de l'Ind. Minrl. St. Etienne, C-R., Oct.,1911, p. 580; 2400 w; 75c.

Guttman, A.—*Fünfzig Jahre gekörnte Hochofenschlacke;* [Blast furnace slags, their composition and review of 50 years' developments in their utilization as cement].—Ton Industrie Ztg., May4,1912; p. 572; 1500 w; 35c.

Hammond, E. K.—*The Utilization of Blast Furnace Gases;* [at American plants, especially Gary, Ind.; from the "Armour Engineer"].—Chemi. Engr., March,1912; p. 117; 4000 w*; 35c.

Johannsen, O.—*Ueber Staubbestimmung in Gichtgas;* [Estimation of dust in flue gases; report of chemical committee of Ver. Deu. Eisenhüttenleute].—Stahl & Eisen, Jan.4,1912, p. 16; 2500 w; 75c.

Langheinrich, E.—*Vorschlage zur Verbesserung der Eisen- und Schlackenabfuhr in Hochofenwerken;* [Improvements in removing iron and slag in blast-furnace plants].—Stahl & Eisen, Nov.16,1911, p. 1870; 2500 w*; 75c.

Naegeli, H.—*Bestimmung von Gasmengen in Eisenhüttenbetrieben;* [Flue-gas analysis and the determination of the amount of gas requisite in the blast furnace].—Stahl & Eisen, Apr.11,1912; p. 617; 1000 w*; 75c.

Pfoser, A.—*Utilizing the Waste Heat of the Open-Hearth Furnace for Steam Raising;* [from Stahl & Eisen].—Iron & Coal Trades Rev., March29,1912; p. 490; 750 w; 35c. Also in Canadian Engr., Apr.18, p. 558; 750 w; 25c.

Steinweg, E.—*Die Konstitution des vierbasischen Kalkphosphates und seine Reduzierbarkeit durch kohlenstoffhaltiges und reines Eisen;* [Chemical constitution of tetra-basic lime phosphate and reduction by carbon-bearing and pure iron].—Metallurgie, Jan.8,1912, p. 28-40; 50c.

———. *Reference List for Phosphates;* [Bibliography of world's phosphates, slag phosphates, etc.].—U. S., 62d Congress, 2d Session; Senate Doc. No. 190; 1912; pp. 78-106.

———. *Use of Coke-Oven and Blast-Furnace Gases in Westphalia.*—Iron & Coal Trades Rev., March22,1912; p. 458; 500 w; 30c.

STEEL MANUFACTURING AND FINISHING

Abbott, R. R.—*Steel and Its Heat Treatment;* [Alloys and varying effects on critical temperatures; read to Cleveland Engg. Soc., April 23, 1912].—Iron Age, May9, 1912; p. 1150; 2500 w; 30c.

Canaris, C.—*The Use of Anti-Piping Thermit in Steel Ingots.*—Iron Trade Rev., March28,1912; p. 701; 2100 w; 20c.

Emmons, J. V.—*Structure and Heat Treatment of Tool Steel;* [Read before Metal Trades, etc., Club, Cleveland, U. S.; Feb. 17,1912].—Iron Trade Rev., Feb.22,1912; p. 450; 3500 w*; 20c. Also in Iron Age, Feb. 22, p. 472; 3500 w*; 30c.

Goehrens, P.—*Ueber die Gase aus technishen Eisensorten;* [The gases absorbed in the melting of industrial iron].—Eisenhüttenm. Inst. Aachen, Mittlngn.; Vol. IV, 1912; pp. 130-142*; $4.20.

Gordon, C. S.—*The Installation and Use of Pyrometers in Steel Mills;* [Illinois Steel Co. works].—Met. & Chemi. Engg., June, 1912; p. 331; 3500 w*; 35c.

Grzeschik, T.—*Wärmeentwickelung einer abgeschiedenen graphit - silicium - phosphorhaltigen Eisenmasse;* [Heat treatment and tests of an isolated graphite-silicon-phos-

phorus-bearing iron].—Chemiker Ztg., May 4,1912; p. 505; 400 w; 30c.

Herron, J. H.—*The Heat Treatment of Steel;* [Common carbon steel, up to 1 per cent carbon; read to Metal Trades Superintendents', etc., Club, Cleveland, Engl.; abstract].—Mechl. World, Feb.2,1912; p. 56; March15, p. 128; 4800 w*; 50c.

Lake, E. F.—*Casting Steel and Alloys in Vacuo.*—Iron Age, Jan.11,1912, p. 119; 3500 w*; 30c.

Marton, G.—*The Production of Small Ingots in Quantity;* [From Stahl & Eisen].—Iron & Coal Trades Rev., Apr.5,1912; p. 531; 1000 w*; 35c.

Morette, A.—*Four Martin et four électrique, comparaison des prix de revient de l'acier;* [Comparison of net cost of producing steel in Martin and electric furnace].—Echo d. Mines, March7,1912; p. 298; 275 w; 35c. Also in Jnl. du Four Electriq., March, p. 104; 275 w; 35c.

Perkins, F. C.—*An Oil-Fired Converter;* [Darlington converter for steels].—Mines & Minerals, Apr.,1912; p. 565; 1200 w*; 35c.

Philips, M.—*Ueber Untersuchungen an Wärmeöfen;* [Laboratory tests with warming furnaces].—Stahl & Eisen, Jan.4,1912, p. 13, 2400 w*; 75c.

Schömburg, W. — *Einige Mitteilungen über Betriebs-Neuanlagen deutscher Hüttenwerke;* [Notes on some innovations in equipment in German steel works].—Berg- & Hüttenm. Rundschau, Feb.20,1912; p. 107; 1200 w; 35c.

Simmersbach, O.—*Roheisenmischer und ihre Anwendung im Eisenhüttenbetriebe;* [Pig-iron mixers and their use in the iron foundry; read to Ver. Deut. Eisenhüttenleute, Oberschlesien branch].—Berg- u. Hüttenm. Rundschau, Dec.20,1911, p. 53; Jan.5,1912, p. 63; Jan.20, p. 77; 20,000 w*; 70c.

Souther, H.—*Notes on the Heat Treatment of Steel.*—Iron Age, Jan.4,1912, p. 22; 2800 w; 65c.

Springorum, Fr.—*Experimentelle Untersuchungen des Hoeschprozesses;* [Experimental tests of the Hoesch cast-steel process].—Eisenhüttenm. Inst. Aachen, Mittlngn.; Vol. IV, 1911; pp. 69-91*; $4.20.

Stead, J. E.—*Notes on the Welding-Up of Blowholes and Cavities in Steel Ingots; Part* 2.—Iron & Steel Inst., Jnl., May,1912; 12 pp*; 50c. Abstract in Engnrg., May10, p. 639; 3000 w*; 35c. Also in Iron & Coal Trades, May10, p. 722; p. 732; 3000 w*; 45c.

Thompson, A. J.—*Infusion Steel Processes.*—Cassier's Mag., Jan.,1912, p. 88; 1200 w*; 35c.

Troubine, K.—*Sur les soufflures superficielles dans les lingots d'acier;* [Notes on the superficial blow holes in steel ingots].—Rev. de Mét'l'gie, Feb.,1912; pp. 127-132*; $1.15.

West, T. D.—*Gas Cavities, Shot and Chilled Metal in Iron Castings.*—Amer. Foundrym. Asso., Trans.; May,1911; pp. 39-61*; 20c.

Abstract in Engnrg., June23, p. 835; 7000 w; 30c. Also in Canadian Engr., Aug. 12, p. 171; 3300 w*; 30c. Also in Mechl. World, Aug.18, p. 77; 1500 w*; 35c. Also in Castings, March,1912, p. 184; 6000 w*; 25c.

Also in German in Giesserei Ztg., Oct.1, 1911; p. 585; Oct.15, p. 621; Nov.1, p. 663; 5000 w; 90c.

———. *Competitive Conditions Between the Open-Hearth Furnace and the Bessemer Converter;* [Translated from Soc. de l'Ind. Minerale St. Etienne, Bull.].—Canadian Engr., Apr.11,1912; p. 529; 1600 w; 25c.

———. *Continuous Oil or Gas-Fired Heating Furnaces;* [Gordon-Prall system at Youngstown, Ohio].—Iron Trade Rev., Apr.25,1912; p. 911; 1000 w*; 20c.

———. *Ein ununterbrochener Eisengiessereibetrieb;* [A continuous-system iron foundry.—Giesserei Ztg., Jan.1,1912, p. 18; Jan. 5, p. —; 2500 w*; 65c.

———. *Les propriétés du silico-calcium;* [The properties of silico-calcium and use in desulphurizing and dephosphorizing of steel].—Jnl. du Four Electriq., Apr.15, 1912; p. 175; 350 w; 35c.

———. *Machine for Trepanning Steel Ingots.*—Engnrg., Apr.19,1912; p. 530; 500 w*; 30c.

CEMENTATION; TEMPERING; ANNEALING

Charpy, G., and S. Bonnerot.—*Sur la perméabilité du fer par l'hydrogène;* [The permeability of iron to hydrogen].—Rev. de Métal'gie, May,1912; pp. 398-400; $1.15.

English abstract in Iron & Coal Trades Rev., June14, p. 953; 500 w; 35c.

Charpy, G., and S. Bonnerot.—*Sur la cémentation du fer par le carbone solide;* [Cementation with solid carbon].—Rev. de Métal'gie, May,1912; pp. 305-320*; $1.15.

Cone, E. F.—*Sulphur Increase in Annealing.*—Iron Age, March7,1912; p. 603; 500 w; 30c.

Guillet, L.—*Ueber den gegenwärtigen Stand von Theorie und Praxis des Zementationsprozesses;* [Status of the theory and practice of case-hardening; German abstract from paper in French from "Génie Civil," June24-Aug.5,1911].—Stahl & Eisen, Jan.11,1912, pp. 58-61; Feb.1, pp. 189-194; 7000 w*; $1.

English abstract in Iron Age, Apr. 11,1912; p. 910; 3000 w; 30c. Also in Mechl. World, May10, p. 220; 1800 w; 35c.

Kurek, F.—*Beiträge zur Kenntnis der Zementation des Eisens mittels Gasen;* [Cementation of iron by means of gases].—Berlin, 1911; 21 pp. 15 figs; (Techn. Hochschule dissert.).

Lake, E. F.—*The Carbonizing of Steel by the Use of Gases.*—Iron Age, Jan.4,1912, p. 81; 5000 w; 65c.

de Nolly, H. and L. Veyret.—*Etude sur les gaz dégagés par les céments;* [Causes of violent gas outbursts in the cementation process].—Rev. de Mét'l'gie, Feb.,1912; pp. 53-60*; $1.15.

West, T. D.—*New Process for Chilling and Hardening Cast Iron;* [Read to Amer. Soc. of Mechl. Engrs., May,1912].—Castings, June,1912; p. 81; 6000 w*; 25c. Also in Iron Trade Rev., June27, p. 1372; 6000 w*; 20c. Also in Engnrg., July5, p. 28; 7000 w*; 30c. Also in Iron & Coal Trades Rev., June21, p. 994; 3000 w*; 35c. Also in Engg. Rev., July15, p. 21; 8000 w*; 35c.

Weyl, F.—*Ueber Zementation im luftleeren Raum mittels reinen Kohlenstoffs;* [Cementation in vacuo with pure carbon].—Eisenhüttenm. Inst. Aachen, Mittlngn; Vol. IV, 1911; pp. 160-176*; $4.20.

———. *Cast-Iron Annealing Pots for Case Hardening Steel.*—Castings, June, 1912; p. 65; 500 w*; 35c.

———. *Theorie der Temperkohlebildung und der Tempervorgänge;* [Theory of carbon re-actions in the tempering process].—Eisen Ztg., Dec.9,1911, p. 85; 1600 w; 35c.

ROLLING MILLS

Ablett, C. A.—*Some Modern Developments in the Electric Driving of Rolling Mills;* [Abstract; read to Cleveland (U. K.) Instn. of Engrs.].—Iron & Coal Trades Rev., Dec.15,1911, p. 969; 2200 w; 30c.

Ahrens, A. S.—*The Power Requirements of a Steel Tube Mill;* [Discusses electrical driving at Spang-Chalfant mill, Pittsburgh; from El. Jnl.]—Iron Trade Rev., Dec.21, 1911, p. 1099; 3200 w*; 25c.

McCormick, B. T.—*Electrification of a Reversing Mill of the Algoma Steel Co.;* [Sault Ste. Marie, Ont., Canada].—Amer. Inst. Electr. Engrs; Proc., Apr.,1912; pp. 297-305*; $1.15. Abstract in Electrician, June7, p. 350; 2000 w*; 35c.

Heym, W.—*Turbinenantrieb für Walzwerke;* [Turbine drive for rolling mills].—Kali Erz & Kohle, May25,1912; p. 519; 1500 w; 35c.

Holverscheid, A.—*Die Walzwerke, Einrichtung und Betrieb;* [Rolling Mills, their equipment and operation].—Leipzig, 1912; 163 pp.; 151 pp*; $1; (book).

ELECTROSIDERURGY: SMELTING AND HEATING

Baily, T. F.—*Electric Furnaces for Heating Bars and Billets;* [Read to Amer. Electrochemi. Soc., April, 1912; abstract].—Met. & Cheml. Engg., May,1912; p. 291; 750 w; 35c.

vom Baur, C. H.—*The Position of the Induction Furnace.*—Met. & Cheml. Engg., Jan.,1912, p. 14; 500 w; 35c.

Campbell, D. F.—*Progress in the Electrometallurgy of Iron and Steel;* [abstr.; read to Faraday Soc., Oct.,1911].—Iron & Coal Trades Rev., Oct.13,1911, p. 611; 1000 w; 30c. Also in Electrician, Nov.3, p. 149; 2500 w; 30c. Also in El. Rev. (London), Nov.17, p. 815; 600 w; 30c. Faraday Soc., Trans., June,1912; pp. 195-202.

In Spanish in Revista Minera, Dec.1,1911, p. 589; 1000 w; 35c.

Campredon, L.—*Fabrication de la fonte au four électrique;* [Possibilities in electric pig-iron production, especially in Scandinavia].—Métallurgie, May29,1912; p. 339; 600 w; 35c.

Catani, R.—*La produzione diretta dell' acciaio dai minerali a mezzo dei forni elettrici;* [Production of steel direct from ores by the electric furnace; read to Internatnl. Congr. of Applied Electr'y, Turin, Sept., 1911].—Rassegna Mineraria, Nov. 1,1911, p. 211; Dec.1, p. 258; Dec.11, p. 276; 10,000 w; $1.00.

Catani, R.—*Applications of Electricity in the Metallurgical Industry of Italy;* [Electric smelting of ores, iron, and pyrite cinders.—Iron & Steel Inst., Jnl., Oct.,1911; 26 pp; 50c.

Reprint in Iron & Coal Trades Rev., Oct. 6,1911, p. 522; 6000 w; 30c. Also in Met. & Cheml. Engg., Dec., p. 642; 6000 w; tables; 35c.

Abstract in Canadn. Mng. Jnl., Oct.15, p. 654; 3200 w; 25c. Also in El. Rev. (Chicago), Oct.28, p. 893; 3200 w; 25c. Also in Electrician, Dec.22, p. 429; 2500 w; 35c.

In Italian in Met'l'gia Ital., Sept.-Oct., pp. 548-562; 45c.

Engelhardt, V.—*Fortschritte der Technik; Die direkte Erzeugung von Stahl aus Erz im elektrischen Ofen;* [Review of processes of direct steel manufacture from iron ore in the electric furnace].—Montanist. Rundschau, Jan.1,1912, p. 22; 500 w; tables; 45c.

Eydam, P. — *Elektrometallurgie des Eisens; Legierter und unlegierter Werkzeugstahl;* [Electrometallurgy of iron; tool steels, alloyed and pure; part 1, pure].—Elektrochem. Zts., Jan.,1912; p. 281; Feb., p. 312; 1500 w; $1.

Grönwall and Ludwika.—*Die elektrische Eisenschmelzung;* [Electric smelting of iron at Domnarfvet and elsewhere in Norway; read to Polytekn. Foren. i Kristiania; brief abstract in] Chemiker Ztg., May21,1912; p. 570; 250 w; 35c.

Guillet, L.—*La fabrication des ferros;* [Manufacture of the ferro-alloys; read to Soc. d. Ingrs. Civ. France; abstract].—Jnl. du Four Electriq., Feb.15,1912; p. 83; March1, p. 104; March15, p. 127; 3500 w; 65c.

German abstract on ferro-silicon in Elektrotechnik & MaschBau, Feb.18.1912, p. 147; 750 w; 35c.

Härdén, J.—*The Paragon Electric Furnace.*—Faraday Soc., Trans.; June,1912; pp. 183-195*; $2.65.

Härdén, J.—*Electric Smelting and Reduction of Ore in England;* [Tin, wolfram and ferro-alloys, by Electric Furnaces & Smelters, Ltd.].—Electrician, Dec.29,1911, p. 467; 2500 w; 30c. Abstract in Mining & Engg. World, March16,1912, p. 604; 1500 w; 10c. Also in U. S. Consul. Rep., March23, p. 1192; 1000 w; 20c.

Harold and Stedman.—*Du four electrique à acier;* [Applications of electric furnace in steel manufacture; French abstract of English paper read to Cleveland, Engl., Instn. of Engrs.].—Jnl. du Four Electriq., Feb.15,1912; p. 79; 2000 w; 35c. Also in Echo d. Mines, Feb.22, p. 233; 2000 w; 35c.

Hering, C.—*Pinch-Effect Furnace;* [Wear on refractory walls].—Met. & Cheml. Engg., April,1912; p. 196; 500 w; 35c.

Hering, C.—*Some Engineering Features of Electric Furnaces;* [Economic comparisons with fuel heat].—Engrs. Club of Phila., Proc., Oct.,1911, p. 299-312*; 65c.

Abstract in Engg. News, Jan.11,1912. p. 56; 5000 w*; 25c. Also in Engg. Mag., Feb., pp. 784-792; 6000 w*; 35c. Also in Canadian Engr., Apr.11, p. 528; 2100 w; 25c.

Heym, W.—*Die Kosten für die Stahlerzeugung in Giessereibetrieben;* [Costs of electrosteel production for foundries].—Kali Erz & Kohle, March5,1912; p. 23; 1200 w; 35c.

Heym, W.—*Die Wirtschaftlichkeit der elektrischen Schmelzöfen;* [The industrial and commercial practicality of the electrosteel furnace].—Kali Erz & Kohle, Feb.15, 1912; p. 159; 1200 w; 35c.

Hiorth, Alb.—*Design of a 30-ton Induction Electric Furnace.*—Amer. Electrochemi. Soc., Trans., Sept.,1911; 15 pp*; 50c.

Abstract in Met'l'gl & Cheml. Engg., Oct., p. 534; 1600 w*; 35c. Also in Iron & Coal Trades Rev., Oct.5,1911, p. 609; 3000 w*; 30c. Also in Jnl. of Ind'l & Engg. Chem'y, Nov., p. 84-849; 3600 w*; 65c. Also in Cheml. Engr., Jan.,1912, p. 23; 3000 w*; 35c.

Hiorth, A., and F. A. J. FitzGerald.—*Electric Induction Furnace Design and Electric Steel Furnaces;* [Discussion of FitzGerald's remarks on Röchling-Rodenhauser furnace].—Met. & Cheml. Engg., Feb.,1912, p. 71; 1500 w; 35c.

Kershaw, J. B. C.—*Electric Furnace Methods of Iron Production;* [Recent developments and various furnaces used].—Iron Trade Rev., Jan.4,1912, p. 41; 4500 w*; 65c.

Kothny, E.—*Die Elektrostahlerzeugung mit besonderer Berücksichtigung des Kjel-*

lin-Ofens; [Production of electrosteel with special reference to the Kjellin furnace].—Berg- & Hüttenm. Ver. f. Steiermark & Kärnten, Leoben section, Mittlngn.; read March30,1912; pp. —.

Leffler, J. S.—*Electric Reduction of Iron Ores at Trollhättan;* [Reply to Frick's criticism].—Met. & Cheml. Engg., Feb.,1912, p. 71; 400 w; 35c.

Lipin, W.—*The Nathusius Electric Steel Furnace.*—Met. & Cheml. Engg., April,1912; p. 227; 5000 w*; 35c.

Lorenyzen, H. B.—*Electric Shaft-Furnace Design;* [Discusses U. S. Pat. No. 996,492].—Met. & Cheml. Engg., Feb.,1912, p. 71; 300 w; 35c.

Matt, M. F.—*Ueber die Herstellung von Ferrosilicium;* [On the production of ferro-silicon].—Stuttgart Techn. Hochschule, Dissert., 1911; pp. —; $1.50 (Thesis).

Meyers, C.—*Electric Furnaces;* [Various types for steel and alloy manufacture, and development of electrosteel industry; read to Manchester Asso. of Engrs., and Instn. of Electr. Engrs., Manchester section; abstract].—El. Rev. (London), Apr.26,1912; p. 696; 2600 w; 35c.

Morette, A.—*Four Martin et four électrique, comparaison des prix de revient de l'acier;* [Comparison of net cost of producing steel in Martin and electric furnace].—Echo d. Mines, March7,1912; p. 298; 275 w; 35c. Also in Jnl. du Four Electriq., March, p. 104; 275 w; 35c.

Müller, A.—*Erfahrungen in der Elektrostahlerzeugung im Girodofen;* [Tests of 3-ton Girod furnace at Gutehoffnung works Oberhausen, Germany].—Stahl & Eisen, July20,1911, p. 1165; Aug.3, p. 1258; 8000 w*; tables; $1.50. Also in Zts. f. Elektrochemie, Sept.1, p. 769; 40c.

English abstract in Met. & Cheml. Engg., Nov.,1911, p. 581; 6000 w*; 35c. Also in Engnrg., Feb.23,1912, p. 245; 3000 w*; 35c. Also in Iron & Coal Trades Rev., March1, p. 340; 3000 w*; 30c.

Swedish translation in Jernkontorets Annaler, Bihang, Nov.15,1911; p. 895-916*; 45c.

Myers, C.—*Electric Furnaces;* [Read to Manchester Asso. of Engrs.; abstract].—Iron & Coal Trades Rev., Feb.2,1912; p. 178; 3500 w; 30c.

Nathusius, H.—*Improvements in Electric Furnaces and Their Application in the Manufacture of Steel.*—Iron & Steel Inst., Jnl., May,1912; 38 pp*; 50c. Abstract in Engnrg., May10,1912; p. 622; 6500 w*; 35c. Also in Iron & Coal Trades Rev., May 10, p. 721; 752; 10,000 w; 45c. Also in Iron Trade Rev., May23, p. 1109; 4000 w*; 20c. Also in Electrician, May31, p. 306; 5000 w; 35c. Also in Iron Age, June6, p. 1402; 4500 w*; 30c. Also in Mining & Engg. World, July6, p. 15; 3000 w; 10c. Also in El. Rev. (London), July12, p. 47; 1200 w*; 35c.

German abstract in Chemiker Ztg., June 1, p. 616; July9, et seq., p. 779; 5000 w; 50c.

Neumann, Dr. B.—*Das Eisenhüttenwesen im Jahre* 1910; [Review of siderurgy in 1910; II: foundries, cast-iron and electrosteel].—Glückauf, Dec.9,1911, p. 1911-1917; 50c.

Nicou, P.—*La produzione della ghiza al forno elettrico;* [Production of pig-iron in the electric furnace; Italian description of the Trollhättan tests].—Metal'gia Ital., March,1912; p. 160-185*; April, pp. 255-267*; 70c.

From the French; from Rev. Univ. d. Mines, Feb.,1912; pp. 127-184*; $1.

Pick, W., and W. Conrad.—*La fabrication du ferro-silicium à haute teneur au four électrique;* [Manufacture of high-grade ferro-silicon in the electric furnace].—Rev. de Métal'gie, May,1912; p. 362-397*; $1.15.

Rice, S.—*Experiments in Electrical Smelting of Iron Ores;* [Reviews recent tests].—Mining & Engg. World, Apr.13,1912; p. 811; 4000 w*; 10c.

German abstract in Erzbergbau, Junel, 1912; p. 186; 2500 w; 35c.

Richards, Jos. W.—*Gas Circulation in Electrical Reduction Furnaces;* [Studies on Trollhättan experiments].—Amer. Electrocheml. Soc., Trans. for April,1912; 9 pp; 50c.

Abstract in Iron Age, May2, p. 1092; 1000 w; 30c. Also in Canadian Engr., May 9, p. 650; 1600 w, 25c Also in Met. & Cheml. Engg., May,1912; p. 289; 500 w; 35c.

Richards, J. W.—*Electric Furnace Production of Pig Iron and Steel.*—Engrs. Soc. of W. Penn.; Proc.; March,1912; 32 pp.*; 75c.

Abstract in Engg. Mag., June, p. 449, 1000 w*; 35c. Also in Met. & Cheml. Engg., July,1912; p. 397; 2000 w; 35c.

Robertson, T. D.—*Recent Progress in Electrical Iron Smelting in Sweden;* [Read to Amer. Electrocheml. Soc., abstract].—Electrician, May17,1912; p. 241; 3000 w*; 35c.

Rodenhauser.—*Elektrostahl und seine Gewinnung;* [Electric steel, its properties, advantages, methods of manufacture, arc and induction furnaces, and comparative costs].—Zts. f. angew. Chemie, Dec.1,1911, pp. 2289-2302*; 75c.

Sommer, F.—*Die Grundlagen der Elektro-Stahlerzeugung mit besonderer Berücksichtigung des Systems Héroult;* [Principles of electrosteel production, with special reference to the Héroult system; read to Berg- & Hm. Ver. f. Steiermark].—Montanist. Rundschau, Feb.1,1912; p. 110; Feb. 16, p. 156; March1, p. 206; 9000 w; 80c.

Stedman, H. G. A.—*The Electric Furnace Process as Applied to the Metallurgy of Steel;* [Read to Cleveland, Engl., Instn. of Engrs.].—Iron & Coal Trades Rev., Jan. 26,1912; p. 136; 3000 w; 30c. Also in Canadian Mng. Jnl., May15, p. 337; 6500 w*; 25c.

Stoughton, B.—*Metallurgy of Iron and Steel;* [Progress in 1911].—E. & M. J., Jan. 6,1912, p. 50; 3600 w; 25c.

Sykes, W.—*Power Supply to Electric Furnaces for Refining Iron and Steel.*—Amer. Electrocheml. Soc., Trans; read April,1912; 12 pp.; 2500 w*; 50c. Abstract in Met. & Cheml. Engg., May, p. 290; 750 w; 35c.

Van Langedonck, C.—*Electric Smelting in Sweden;* [Reviews Trollhättan work].—Engg. News, Jan.11,1912, p. 61; 2100 w*; 25c.

Walker, Wm. R.—*The Electric Furnace and High-Grade Steel;* [Read to Amer. Iron & Steel Inst., May, 1912].—Iron Age, May23,1912; p. 1272; 5000 w; 30c. Also in Iron Trade Rev., May30, p. 1172; 5000 w; 20c. Also in Iron & Coal Trades Rev., May 31, p. 877; 1500 w; 35c. Also in Met. & Cheml. Engg., June, p. 371; 3800 w; 35c. Also in Engg. News, June27, p. 1233; 2000 w; 25c. Also in Canadian Engr., July4, p. 122; 2000 w; 25c.

French abstract in Jnl. du Four Electriq, June15, p. 265; July1, p. —; 3000 w; 50c. Also in Echo d. Mines, June24, p. 749; 1500 w; 35c.

Associazone fra gli Industriali Metallurgici Italiani.—*The Metallurgic Industry in Italy; Description of Some of the Principal Works* (in English).—Milan, 1911; 430 pp.*; $2.00 (book).

V. D.—*Les grands hauts fourneaux électriques;* [The world's largest electric furnaces].—Jnl. du Four Electriq., Feb.1, 1912; p. 49; 700 w; 35c.

———. *A Novel Electrical Steel Furnace;* [Nathusius type].—El. Rev. (London), Apr.5,1912; p. 549; 1000 w*; 35c.

———. *Aus Schweden;* [Development of the Swedish iron industry; review of 1911 meeting of Swedish Miners & Metallurgists].—Centralbl. d. Hütten u. Walzwerke, Dec. 5,1911, p. 651; 1200 w; 35c.

———. *Consommation de courant des fours électriques à acier;* [Power consumption in electrical steel furnaces].—Jnl. du Four Electriq., March15,1912; p. 124; 500 w; 35c.

———. *Der elektrische Ofen System Nathusius;* [The Nathusius resistance-arc furnace].—Eisen Ztg., Dec.23,1911, p. 924; 1000 w; 35c.

———. *El horno électrico mayor que existe;* [The world's largest electrosteel furnace; 15-ton Héroult furnace of Illinois Steel Co., S. Chicago].—Madrid Cientifico, Jan.25,1912; p. 45; 500 w; 35c.

———. *Erfahrungen auf dem Gebiete der Elektrostahlgewinnung;* [Experiences with the Kjellin furnace at the Poldi works].—Montanist. Rundschau, Dec.16, 1911, p. 1159; 500 w; 45c.

———. *Héroult Electric Furnace at Braintree, Essex.*—Iron & Coal Trades Rev., March8,1912; p. 367; 500 w*; 30c.
German abstract in Eisen Ztg., July6, p. 493; 500 w; 35c.

———. *La fusion au four électrique du ferro-manganèse;* [Smelting of ferro-manganese in the electric furnace].—Jnl. du Four Electriq., Apr.15,1912; p. 176; May 1, p. —; 2500 w; 50c.

———. *Réglage automatique des fours électriques;* [Automatic regulation of electric furnaces having one or more movable electrodes].—Jnl. du Four Electriq., Jan.1, 1912, p. 8; 2500 w*; 35c.

———. *The Electric Furnace for Small Steel Castings.*—Met. & Cheml. Engg., Jan., 1912, p. 54; 1500 w; 35c.

ELECTROLYTIC PRODUCTION OF IRON

Flade, Fr., and H. Koch.—*Zur Frage nach der Ursache der Passivität des Eisens;* [Investigation of the causes of passivity in iron and in iron electrodes].—Zts. f. Elektrochemie, May1,1912; p. 335; 2800 w; 40c.

Schulze, G.—*Zum elektrochemischen Verhalten des Eisens;* [Experiments with the electrolysis of iron in sulphuric acid baths, and power consumption].—Zts. f. Elektrochemie, May1,1912; p. 326; 3600 w*; 40c.

MISCELLANEOUS HEAT TREATMENT

Ganet, L.—*Les progrès techniques de l'année sidérurgique* 1911; [Technical progress in siderurgy in 1911].—Echo d. Mines, Jan.18,1912; p. 69; Jan.22, p. 84; Jan.25, p. 100; 5000 w; 50c.
Reprint in Rev. Pratiq. d. Inds. Mét'l'gq., Feb.,1912, p. —; March, p. 4; April, p. —; 5000 w; 75c. Also in Soc. Amicale d. . . Mineurs de Douai, Bull.; Feb.10, p. 87-96; Feb.25, p. 118-127; 50c.

Head, B. W.—*Recent Developments in Steel Works Practice;* [From W. of Scotland Iron & Steel Inst., Jnl.].—Iron & Coal Trades Rev., May17,1912; p. 802; May24, 21, p. 851; 6000 w*; 35c.

Langer, —. *Gas- oder Dampfbetrieb auf Hüttenwerken;* [Gas versus steam power in smelting works, foundries, etc.].—Stahl & Eisen, Dec.21,1911; pp. 2088-2094; 75c.

Leber, E.—*Das Eisengiessereiwesen in den letzten* 10 *Jahren;* [Progress in foundry practice in the last 10 years; read to Deu. Giessereifachleute, Dec.,1911].—Stahl & Eisen, Jan.25,1912, p. 129-135; Feb.22, p. —; 10,000 w; $1.

Mathesius, —. *Die Entwickelung der deutschen Eisenindustrie seit Einführung des Thomasverfahrens;* [Development of the iron and steel industries in Germany since the introduction of the Thomas basic process].—Ver. zur Beförderung d. Gewerbefleisses, Verhandl., Jan.,1912; pp. 35-76*; $1.

Morette, A.—*Compte rendu des travaux de la section de Métallurgie au Congrès International de Düsseldorf;* [Summary of papers on metallurgy read at International Mining Congress, Düsseldorf, 1910; chiefly on iron and steel, and on gas-producers].—Soc. de l'Ind. Minérale St. Etienne, Bull; Jan.,1912; pp. 5-122*; $1.

Neumann, Dr. B.—*Des Eisenhüttenwesen im Jahre* 1910; [Review of siderurgy in 1910; II: foundries, cast-iron and electrosteel].—Glückauf, Dec.9,1911, p. 1911-1917; 50c. Also reviewed by Neumann in Zts. f. angew. Chemie, Dec.29, p. 2451-2459; 50c.

Stoughton, B.—*Metallurgy of Iron and Steel;* [Progress in 1911].—E. & M. J., Jan. 6,1912, p. 50; 3600 w; 25c.

Unger, J. S.—*Metallurgical Developments in Iron and Steel;* [Discusses changes in blast-furnace and steel processes, heat treatment, alloys, segregation, etc.; read to Amer. Iron & Steel Inst., May,1912].—Iron Age, May23,1912; p. 1275; 4000 w; 30c. Also in Iron Trade Rev., May23, p. 1115; 4000 w*; 20c. Also in Mechl. World, July 12, p. 21; July19, p. 28; 3000 w; 50c.

———. *Les progrès techniques de l'année sidérurgique* 1911; [Technical progress in siderurgy in 1911].—Soc. Amicale d. . . . Mineurs de Douai, Bull.; Feb.10,1912, p. 87-96; Feb.25, p. 106-; 5000 w; 35c.

CHAPTER V.—IRIDIUM; LEAD-ZIRCONIUM (Incl.); MISCELLANEOUS.

Iridium

See Platinum.

Lead

See also Paints under Non-Metals.

See also "Sanitation, etc., in Milling and Metallurgy," Chapter 9, for papers on industrial lead poisoning.

MINES AND MINING; GEOLOGY

Bain, H. F.—*Flats and Pitches of the Wisconsin Lead and Zinc District.*—"Types of Ore Deposits," by H. F. Bain, and others; 1911; pp. 77-102*.

Bain.—*Japan Mineral Production.*—See Japan.

Bell, R. N.—*13th Annual Idaho Report.*—See under Idaho.

Bell, R. N.—*Lead and Silver Resources of Lemhi County, Idaho;* [Extract from 13th annual report].—Mng. Sci., May9,1912; p. 406; May16, p. 431; 4500 w*; 30c.

Bell, R. N.—*Mines and Mills of Shoshone County, Idaho;* [From 13th annual report of state mine inspector].—Mining & Engg. World, Apr.6,1912; p. 769; 3200 w*; 10c.

Bergeat.—*Geology of Contact Ore Deposits, Concepcion del Oro, Mex.*—See Copper.

Beyschlag, Krusch and Vogt.—*Monograph of Ore Deposits;* [in German].—See under Gold.

Bigham, Geo. W.—*Oklahoma Lead and Zinc Mining in* 1911.—E. & M. J., Jan.6,1912, p. 23; 500 w; 25c.

Brady, A. C.—*Review of Mining in Foreign Countries in* 1911; *Mexico* [Sonora, by J. I. Cohn].—Mining & Engg. World, Jan. 27,1912; p. 249-261; 19,000 w; 25c.

Braecke, G.—*La région minière de Linarès-La Carolina;* [The lead mining region of Linares-Carolina, Spain].—Rev. Univ. d. Mines, March,1912; pp. 243-262*; $1.

Spanish abstract in Rev. Minera, May1, 1912; p. 206; May24, p. 245; June1, p. 261; 50c.

Brady, A. C.—*Mexico,* 1911.—See Mexico.

Buckley, E. R.—*Lead and Zinc Deposits of the Ozark Region;* [Southeast and central Missouri, Joplin district, and Missouri-Arkansas].—"Types of Ore Deposits," by H. F. Bain, and others; 1911; pp. 103-132*.

Butler, B. S., and J. P. Dunlop.—*Metal Production in the Central States;* [Preliminary U. S. Geol. Survey figures for 1911 on lead, zinc, copper, silver in Michigan, Wisconsin, Kansas, Arkansas and Oklahoma].—M. & S. P., May25,1912; p. 729; 1500 w; tables; 20c.

Chapman, T. —*The Miami Zinc-Lead District, Oklahoma.*—E. & M. J., June8,1912; p. 1146; 1500 w*; 25c.

Collins.—*Colorado,* 1911.—See Colorado.

Collins, J. H.—*Observations on the West of England Mining Region.*—Roy. Geol. Soc. of Cornwall, Trans.; Vol. XIV; 1912; pp. 684*; (book).

Delmer.—*Belgian Mining and Metallurgy,* 1901-1910.—See under Zinc.

Fisher, F. L.—*Montana,* 1911.—See Montana.

Flegel.—*Mineral Deposits of North Africa;* [In German].—See under N. Africa.

Fowler, S. S.—*Costs and Cost-Conditions at Bluebell Mine, B. C.*—Canadian Mng. Inst., Bull. 18, Feb.,1912; p. 3-12; $1.20.

Gonzalez, F., A. Grothe, and L. Salazar. —*The Mining Industry of Mexico; No. 2; State of Hidalgo, Part 2;* [Mines and geology; silver-gold-lead; opal, coal, grahamite, iron, zinc, etc.].—Mexico City, 1911; 108 pp.; $1.50.

Goodale.—*Newfoundland.*—See Newfoundland.

Hafer, C.—*The Mines of the Sonora Valley, Sonora, Mex.*—Mining & Engg. World, Apr.27,1912; p. 903; 2200 w*; 10c.

Hahn, O. H.—*Germany,* 1911.—E. & M. J., Jan.13,1912; p. 124; 1500 w; 25c.

Hall, F.—*Colorado,* 1911.—See Colorado.

Hedley, R. R.—*British Columbia in* 1911. —See under Br. Columbia.

Heikes, etc.—*Metal Production in Western and Alaskan Mines,* 1910.—See under U. S.

Henahen.—*Colorado,* 1911.—See Colorado.

Hermitte.—*La Concordia Mine.*—See under Argentina.

Hershey, O. H.—*Genesis of Lead-Silver Ores in Wardner District, Idaho.*—M. & S. P., June1,1912; p. 750; June8, p. 786; June 15, p. 825; 11,000 w*; 45c.

Huston, Geo.—*Review of Mining in the U. S. in* 1911; *Coeur d'Alenes.*—Mining & Engg. World, Jan.27,1912; p. 214; 1000 w; 25c.

Jacobs, E.—*Metallurgy in British Columbia in* 1911.—See British Columbia.

Jacobs, E.—*Review of Mining and Production in British Columbia in* 1911.—Canadian Mng. Jnl., Jan.1,1912; p. 7; 4500 w; 25c. Also in M. & S. P., Jan.6,1912, p. 68; 3000 w; 35c. Also in E. & M. J., Jan.6, p. 75; 2000 w; 35c. Also in Mining & Engg. World, Jan.27, p. 261; 7000 w; 25c.

Lakes, Arthur, sr.—*Operations at the Wellington Mine, Breckenridge, Colo.*—Mining & Engg. World, Dec.23,1911, p. 1265; 2500 w*; 10c.

Lewis, J. H.—*Review of Mining in the U. S. in* 1911; *Wisconsin* [Lead-zinc].—Mining & Engg. World, Jan.27,1912; p. 243; 6000 w; 25c.

Mance.—*Australasia,* 1911.—See Australia.

Martin.—*California,* 1911.—See Calif.

Massart, E.—*Production et Valeur de l' Argent, du Plomb et du Zinc;* [Production and Values of the World's Silver, Lead and Zinc].—Paris, 1911; pp. —; $1.00 (pamphlet).

Nelson, W. A.—*Notes on Lead in Tennessee.*—Resources of Tenn., March,1912; p. 100-119*; 50c. Abstract in Mining & Engg. World, March16, p. 603; 800 w; 10c.

Palmer, L. A.—*Mining in the Tintic District, Utah;* [Godiva-Sioux zone; mining and milling practice; silver-lead].—Mines & Minerals, Jan.,1912, p. 375; 4000 w*; 35c.

Palmer, L. A.—*Mining on the East Side of Tintic District, Utah.*—Salt Lake Mng. Rev., Apr.15,1912; p. 11; 3200 w*; 25c.

Parks, H. M.—*Resources of Oregon.*—See under Oregon.

Pittmann.—*New South Wales,* 1911.—See Tin.

Perkins, E.—*Arizona,* 1911.—See Arizona.

Plumb, C. H.—*The Miami, Oklahoma, Mining Camp.*—Mines & Minerals, May, 1912; p. 627; 1000 w*; 35c.

Popowitsch, D. A.—*Die Mineralschätze des polaren Russlands;* [Lead deposits of the Murma coast, and mineral riches of Arctic Russia; read to Archangel Soc. for the Russian North; abstract in German in]. Kohle u. Erz, Jan.1,1912, p. 21; 500 w; 35c.

Rangel, M.—*Mineral Resources Durango;* [in Spanish].—See under Mexico (Durango).

Read, T.—*Mining in China.*—See China.

Rice, S.—*Progress in the Coeur d'Alene District, Idaho.*—Mining & Engg. World, June1,1912; p. 1185; 2500 w*; 10c.

Robertson, W. F.—*British Columbia,* 1911.—See under Br. Columbia.

Ruhl, O.—*Review of Mining in the U. S. in* 1911; *Missouri-Kansas Zinc-Lead.*—Mining & Engg. World, Jan.27,1912; p. 220; 2700 w; 25c.

Schnatterbeck, C.—*Metal Markets in* 1911.—Mng. Sci., Jan.25, p. 80; 5300 w*; 25c.

Scott, W.—*Idaho,* 1911.—See Idaho.

Scott, W. A.—*Utah,* 1911.—See Utah.

Scott, W. A.—*Proposed Changes in the Lead Tariff.*—M. & S. P., Feb.10,1912; p. 247; 750 w; 20c.

Sheldon, G.—*Alamos District.*—See Sonora.

Sheldon, G. L.—*The Sinaloa Mining District, Sinaloa, Mex.*—M. & S. P., Dec.23, 1911, p. 803; 1000 w*; 20c.

Sidenvall, K.—*Om Oberschlesiens geologi och malmbrytning;* [Geology and ore deposits of Upper Silesia; coal, lead-zinc].—Jernkontor. Annaler, Bihang; Dec.,1911; pp. 971-978*; 45c.

Siebenthal, C. E.—*The Copper, Lead and Zinc Industries of the Southern States.*—Manfrrs. Record, Feb.22,1912; p. 61; 4500 w; 65c.

Snider, L. C.—*Review of Mining in the U. S. in* 1911; *Oklahoma.*—Mining & Engg. World, Jan.27,1912; p. 231; 3600 w; 25c.

Snider, L. C.—*Oklahoma Lead and Zinc Fields.*—E. & M. J., Dec.23,1911, p. 1228; 3600 w*; 25c.

Stoneham, W. J.—*Nevada,* 1911.—See Nevada.

Vallance, J.—*Standard Mine.*—See Br. Columbia.

Walter, P.—*New Mexico,* 1911.—See N. Mex.

Wheeler, H. A.—*Southeastern Missouri in* 1911.—E. & M. J., Jan.6,1912, p. 17; 2100 w; 25c.

Wittich, L. L.—*The Joplin District in* 1911.—Mines & Minerals, Feb.,1912; p. 447; p. 433; 1500 w; 35c.

Zalinski, E.—*Utah,* 1911.—See Utah.

Zalinski, E. R.—*Notes on Pioche, Nevada.*—E. & M. J., March23,1912; p. 604; 1500 w; 25c.

Zehring, W.—*Utah,* 1911.—See Utah.

Zook, J. A.—*The Joplin District in* 1911; [Statistical review].—E. & M. J., Jan.6,1912, p. 24; 1500 w; tables; 25c.

Villasante, F. B.—*Cartagena Histórica;* [History of Cartagena, Spain].—Cartagena, 1912; 45 pp.; $1.50; (pamphlet).

———. *Australasian Mining,* 1911.—M. & S. P., Jan.6,1912; p. 56; 2400 w*; 35c.

———. *Idaho,* 1911.—Mining & Engg. World, Jan.27,1912; p. 213; 1500 w; 10c.

———. *Joplin Lead and Zinc Production,* 1911.—M. & S. P., Jan.13,1912, p. 109; 500 w; table; 20c.

———. *Los criaderos de Afra;* [The ore deposits of Afra, Mediterranean Spain; iron and galena].—Ingeniería (Madrid), March 10,1912; p. 77; 2000 w; 35c.

———. *Mining in the Coeur d'Alenes;* [Reviews zinc and lead production, 1911].—E. & M. J., Jan.6,1912, p. 16; 500 w; 25c.

———. *Mining in Nevada in* 1911.—E. & M. J., Jan.6,1912; p. 67; 3000 w; 25c.

———. *N. Y. Metal Prices for* 14 *Years.*—Iron Age, Jan.18,1912; p. 192; charts; 30c.

———. *Para el renacimiento del distrito minero-metalurgico de Cartagena;* [Rejuvenation of the Cartagena district, Spain].—Rev. Minera, Apr.8,1912; p. 169; 2800 w; 35c.

———. *Production d'Algérie,* 1911.—Echo d. Mines, March11,1912; p. 306; 35c.

———. *Production of Lead;* [U. S. statistics in 1911].—E. & M. J., Apr.20,1912; p. 773; 500 w; tables; 25c.

———. *Protest Against Lead Zinc Tariff Reduction;* [Comparative costs in Mexico and in Joplin district, Mo.].—Mining & Engg. World, March2,1912; p. 512; 1200 w; 10c.

———. *Refined Lead and Spelter in the U. S. in* 1911; [Also reviews mining production].—Mining & Engg. World, Jan.27, 1912; p. 161; 4000 w; tables; 10c.

———. *Review of Mexican Output,* 1911.—Mex. Mng. Jnl., Jan.,1912; p. 15; 2100 w; 35c.

———. *Slocan Star Mines, Ltd., Slocan, B. C.*—Brit. Columbia Mng., etc., Record, Oct.,1911, p. 88; 1800 w*; 35c.

———. *Statistik der Oberschlesischen Berg- und Hüttenwerke für* 1911; [Statistics of mining and metallurgy in Upper Silesia in 1911].—Oberschles. Berg- & Hüttenm. Ver., Zts; Feb.,1912; pp. 62-75; tables; 45c. Abstract in Montanist. Rundschau, Apr.16, pp. 359-361; 45c.

———. *The Metal Markets in* 1911-*II; Spelter, Lead.*—Mng. Jnl., Jan.27,1912; p. 83; 2500 w; 35c.

———. *The Production of Lead in* 1911; [U. S. output, with New York and London market reviews].—E. & M. J., Jan.6,1912, p. 15; 2100 w; 25c.

———. *Ymir Camp.*—See Br. Columbia.

———. *South Australia, July-Dec.,* 1911.—Mng. Jnl., May4,1912; p. 426; 35c.

ORE DRESSING

Bruce, Jas. L.—*Ore Dressing in the Joplin District.*—E. & M. J., Feb.24,1912; p. 405; March2, p. 459; March9, p. 501; March16, p. 553; 15,000 w*; 75c.

Buskett, E. W.—*Canvas-Table Tests for Recovering Lead Slimes;* [In Joplin district, Mo.].—Mining & Engg. World, Feb.24,1912; p. 456; 1000 w; 10c.

Fabien, —. *Le traitement des minerais complexes de zinc et de plomb et le procédé du Bisulfite;* [Treatment of complex lead-zinc ores and the bisulphite process].—Soc. Amicale d. . . Mineurs de Douai, Bull., March10,1912; pp. 140-144; 1500 w; 35c. Abstract in Echo d. Mines, Apr.11, p. 441; 1300 w; 35c.

Holtmann, —. *Das Schwimmaufbereitungsverfahren der Grube Friedrichssegen nach System Leuschner*; [The Leuschner oil-flotation process at the Friedrichssegen mines on the Lahn, Germany; chiefly for chalcopyrite, blende and galena].—Glückauf, March9,1912; pp. 388-393*; 50c.

English abstract in Mng. Jnl., Apr.20, 1912; p. 402; 1000 w; 35c.

McClave, J. M.—*Milling the Tam O'Shanter Ore;* [Argentiferous lead-zinc; Ashcroft, Colo.].—Mines & Minerals, March, 1912, p. 492; 1600 w*; 35c.

MacGregor.—*Electrostatic Separation in the San Juan District.*—See Zinc.

McLellan, J. J.—*Mining and Milling in the Joplin District.*—Canadian Mng. Jnl., March1,1912, p. 159; 1800 w*; 25c.

Mickle, K.—*Flotation of Minerals; Part 2*; [Special reference to tests on Broken Hill, N. S. W. ores and concentrates].—Roy. Soc. of Victoria, Proc., Vol. 24, Part 2; March,1912; 29 pp.*; $3.

Reprint in Australian Mng. Standd., Apr. 11,1912; p. 333; April18, p. 357; Apr.25, p. 381; May2, p. 403; 9000 w*; 80c. Abstract in M. & S. P., July6,1912; p. 12; 2700 w*; 20c. Also in E. & M. J., July18, p. 71; 7500 w; 25c.

Rice, C. T.—*Joplin Jigging Practice.*—E. & M. J., May18,1912; p. 983; 1800 w; 25c.

Rice, C. T.—*Joplin Hand Jig.*—E. &. M. J., June1,1912; p. 1079; 1800 w*; 25c.

Rice, C. T.—*Stationary Dewatering Screen;* and *Steel Tray and Support for Hancock Jigs;* [in Flat River lead district of southeast Missouri].—E. & M. J., June 15,1912; p. 1177; 1000 w*; 25c.

Traphagen, F. W.—The Low-Grade Ore Problem in Colorado; [From Colo. School of Mines Quar'ly, Jan.,1912].—Mining & Engg. World, March30,1912; p. 722; 1400 w; 10c.

Spanish abstract in Mex. Mng. Jnl., June, 1912; p. 55; 1500 w; 30c.

———. *Efficiency in Concentration.*—Mng. Mag., Apr.1912; p. 253; 1600 w; 45c.

———. *Murex Magnetic Co., Ltd.;* [Report of Chairman].—Mng. Jnl., Dec.23.1911, p. 1258; 8000 w; 35c.

———. *The McQuisten Tube Mill Process;* [Oil flotation for zinc-lead slimes at Morning mill, Mullan, Idaho].—Mining & Engg. World, Jan.20,1912; p. 111; 750 w; 10c. Reprinted in Mines & Methods, Feb., p. 406; 20c. Also in W. Australian Mng., etc., Jnl., Apr.6, p. 14; 750 w; 35c.

METALLURGY; CHEMISTRY

See also Alloys, for references to bearing, babbitt, type and similar metals.

Associazone fra gli Industriali Metallurgici Italiani.—*The Metallurgic Industry in Italy; Description of Some of the Principal Works.*—Milan, 1911; 430 pp.*; $2.00.

Ashcroft, E. A.—*Chlorination Process for Complex Ores;* [Reviews Ashcroft's recent patents].—Met. & Chemi. Engg., Feb., 1912, p. 117; 2,000 w*; 35c.

Austin, L. S.—*Silver-Lead Smelting.*—M. & S. P., Jan.6,1912, p. 20, 1500 w; 35c.

Bannister, C. O.—*On the Theory of Blast Roasting of Galena.*—Instn. of Mng. & Met'gy, Bull. 89, Feb.,1912; pp. 1-56*; 50c. (Discussion), Bull. 89, March. pp. 3-21; Bull. 91, Apr., p. 1-4; $1.

Abstract in E. & M. J., Apr.13,1912; p. 750; 2700 w*; 25c. Also in Mines & Minerals, May, p. 607; 3000 w*; 35c.

Barth, O.—*Verarbeitung einer gerösteten bleireichen Kobalt-Nickelspeise;* [Treatment of a roasted cobalt-nickel speiss rich in lead].—Metallurgie, March22,1912; p. 199-216*; 50c.

English abstract in Soc. of Chemi. Ind'y, Jnl., May,1912; 500 w; 65c. Reprinted in E. & M. J., June1, p. 1096; 500 w; 25c.

Brownlee, A. G.—*Importance of the Malm Process in the Metallurgy of Complex Ores;* [Dry chlorination of low-grade ores to recover all the metal values].—American Mng. Congr., Proc; Vol. 14, 1911; p. 168-179. Abstract in Mining & Engg. World, Jan.6,1912; p. 17; 1600 w; 10c. Also in W. Australian Mng. etc. Jnl., Feb.24,1912; p. 12; 1500 w; 35c.

Abstract in German in Erzbergbau, May 1,1912; p. 156; 1000 w; 35c.

Bryden, C. L.—*Blast Roasting;* [Reviews various processes, including Dwight-Lloyd].—Board of Trade Jnl. (Scranton), April, 1912; p. 19; 3600 w; 20c. Reprint in Mining & Engg. World, June29, p. 1351; 10c.

Buskett, E. W.—*Process of Manufacturing Sublimed White Lead.*—Mining & Engg. World, Feb.17,1912; p. 393; 4500 w*; 10c.

Clark, D.—*Australian Mining and Metallurgy.*—Melbourne, 1911; 600 pp.*; $6.50 (book).

Déjardin, L.—*Les progrès modernes de la métallurgie du plomb;* [Recent advances in the metallurgy of lead].—Bull. Techniq. du Nord, Feb.-March,1912; p. 1-7; 2500 w; 75c.

Dinsmore, Chas. A.—*The Needles Smelter;* [U. S. Smeltg., Refg. & Mng. Co. lead-copper plant at Needles, Cal.]—El Paso Mng. Jnl., Dec.,1911, p. 12; 1300 w*; 35c. Also in Mining & Engg. World, Dec.30, p. 1324*; 1000 w*; 10c.

Dwight, A. S.—*Efficiency in Ore Roasting;* [Lead and copper; reviews various systems].—Columbia Univ. School of Mines Quar'ly, Nov.,1911, pp. 1-18; 65c.

Abstract in Mining & Engg. World, Jan. 13,1912, p. 55; 5000 w; 10c. Also in Mng. Sci., Feb.1, p. 127; Feb.8, p. 147; Feb.15, p. 173; Feb,22. p. 189; 5000 w; 50c.

German abstract in Techn. Blätter, Feb. 10,1912; p. 45; 750 w; 35c.

Fairchild, J. G.—*Some New Features in the Electrolytic Determination of Lead;* [From Jnl. of Ind'l & Engg. Chem'y, Dec., 1911].—Mng. Sci., May9,1912; p. 408; 700 w; 20c.

Friedrich, K. and A. Leroux.—*Blei und Schwefel;* [The lead sulphides in nature and in thermic metallurgy].—Inst. f. Metallographie, etc., Freiberg, Mittlngn. f. 1910; pp. 17-19; $3.20.

Friedrich, K. and A. Leroux.—*Arsenides and Smelter Compounds* [in German].—See Thermic Metallurgy.

Hasenclever, Max.—*Manufacture of Sulfuric Acid;* [Progress with pyrite, blende, galena and copper; Hunter Memorial lecture, Liverpool Univ., Oct.,1911].—E. & M. J., Jan.20,1912, p. 175; 3000 w; 25c.

Hedley.—*Smelting in Br. Columbia.*—See Copper.

Heike, W.—*Zinnhaltiger Bleiglanz aus einen Eisenhochofen und das System Schwefelblei und Schwefelzinn;* [Notes on some tin-bearing lead sulphides occurring in a Silesian iron slag, and remarks on the combination of tin and lead sulphides].—Metallurgie, May22,1912; p. 313-319*; 50c.

Hinds, T.—*Output of Lead and Spelter Shows Increase;* [Review in U. S. for 1911].—Mng. Sci., Jan.25,1912, p. 70; 2500 w*; 25c.

Hofman, H. O.—*The Metallurgy of Lead*

in 1911.—E. & M. J., Jan.6,1912, p. 43; 2200 w; 25c.

Hughes, L. S.—*A Method for the Utilization of Lead Furnace Fumes;* [Chrome from open-hearth fumes].—Jnl. of Ind'l & Engg. Chem'y, April,1912; p. 262; 1800 w; 65c. Abstract in Mining & Engg. World, Apr.27, p. 901; 1800 w; 10c.

Liddell, D. M.—*Treating Metal Junk.*—E. & M. J., March2, p. 452; 4000 w*; 25c.

List, E.—*Electrolytic Determination of Lead;* [Guess-Haultain equipment at St. Louis].—Met. & Cheml. Engg., March,1912; p. 135; 750 w; 35c.

Poole, W.—*Treatment of Broken Hill Ores;* [I: Grinding and Concentration; II: Various Sintering Processes; III: Port Pirie Blast-Furnace Practice; IV: Refining base bullion; V: Zinc crusts and drosses; read to Sydney Univ. Engg. Soc.; abstract].—Mines & Minerals, Nov.,1911, p. 227; 7000 w*; (2), Dec., p. 315; 5000 w*; (3), Jan., 1912; p. 381; (4), Feb., p. 423; (5), March, p. 498; 6000 w; $1.10.

Pulsifer, H. B.—*The Important Factors in Blast Roasting.*—Met. & Cheml. Engg., March,1912; p. 153; April, p. 207; 12,000 w*; 65c.

Reprinted in Salt Lake Mng. Rev., May 30, p. 15; June15, p. 16; June30, p. 15; July15, p. 16; 75c.

Pulsifer, H. B.—*The Metallurgy of Lead.*—Salt Lake Mng. Rev., Dec.30,1911, p. 15; Jan.15, p. 16; Jan.30, p. 17; Feb.15, p. 14; Feb.29, p. 15; March15, p. 14; March31, p. 16; Apr.15, p. 15; Apr.30, p. 24; May15, p. 18; May30, p. 15; June15, p. 15; June30, p. 16; 28,000 w*; $1.95.

Ralli, G.—*La consommation de combustible dans la fusion des minerais de cuivre et de plomb;* [Studies of fuel combustion and consumption in the smelting of copper and of lead].—Rev. Univ. d. Mines, Vol. 34, p. 213-296; Vol. 35, pp. 1-104*; $2. Abstract in Rev. de Mét'l'gie, Feb.,1912; p. 84; 2600 w; $1.15.

Schertel, L.—*Studien über einige Verlustquellen des Blei- und Kupferhochofenprozesses;* [Studies on some sources of loss in the blast-furnace process for lead and copper].—Freiberg Bergakademie dissert., 1911; pp. —; (thesis).

Siebenthal C. E.—*The Production of Lead in the U. S. in* 1911; [Smelter statistics].—U. S. Geol. Survey, Press Bulletin; March, 1912; 8 pp; 10c.

Abstract in Mining & Engg. World, Apr. 20, p. 870; 1000 w; tables; 10c. Extract, list of smelteries, in Mng. Sci., Apr.18, p. 348; 20c. Also in M. & S. P., Apr.20, p. 570; 1000 w; 20c.

Weeks, F. D., and E. H. Laws.—*Sinter-Roasting with Dwight-Lloyd Machines at Salida, Colo.*—Met. & Cheml. Engg., Feb., 1912, p. 87, 2000 w*; 35c.

Woiciechowski, B.—*The Electrolytic Determination of Lead in Large and Small Amounts, Using a Gauze Cylinder Anode.*—Met. & Cheml. Engg., Feb.,1912, p. 108; 750 w; 35c.

Traube-Mengarini, M. and A. Scalea.—*Azione dell'acqua distillata e dell'acqua distillata contenente elettroliti sul piombo metallico;* [The action of distilled water and of distilled water containing electrolytes on metallic lead].—Rome, 1912; pp. —; $1.50 (book).

———. *Atomized Metals;* [Chemical Process Co., equipment for atomizing lead, zinc dust, etc.].—Met. & Cheml. Engg., March,1912; p. 180; 1800 w*; 35c.

———. *A New Process for Refining Antimonial-Lead and Other Lead Alloys;* [I. E. Wemple process].—Brass World, Nov., 1911, p. 395; 500 w*; 20c.

———. *Consolidated Mng. & Smelting Co. of Canada, Ltd.;* [Report for 1911 on gold, silver, copper and lead output from smelters at Trail, B. C., and the company's mines].—Canadian Mng. Jnl., Jan.1,1912; p. 28; 1800 w; 25c.

———. *Progresos en los hornos de Cuba;* [Progress in lead and copper metallurgy; water-jackets; electrolytic lead refining; flue dust control].—Mex. Mng. Jnl., June,1912; p. 58; 1000 w; 10c.

———. *Smelter Charges in Utah;* [On Tintic and Park City silver-lead ores].—M. & S. P., Jan.20,1912, p. 145; 500 w; 20c.

———. *The International Smelter, Tooele, Utah.*—M. S. P., March9,1912, p. 371; 1100 w*; 20c.

———. *The Present Status and Prospects in the Metallurgy of Zinc and Lead.*—Met. & Cheml. Engg., Jan.,1912, p. 5; 1200 w; 35c.

———. *The Smelting of Lead for Bullion;* [Magdalena district, Oaxaca].—Los Angeles Mng. Rev., Jan.13,1912, p. 8; 1200 w; 20c.

Lithium

Anderson, A. A.—*Lithium, Its Occurrence, Uses, Determination, and Methods of Extraction.*—Pahasapa, April,1912; p. 11; 2000 w; 65c.

Reprint in Mining & Engg. World, May 18, 1912; p. 1055; 2000 w; 10c. Also in Mng. Sci., May23, p. 449; 20c.

Manganese

Ball, L. C.—*Mount Miller Manganese Mine, Queensland.*—Queensl. Govt. Mng. Jnl., Dec.,1911, p. 615; 300 w; 35c.

Carter, H. A.—*Manganese Mining in British India.*—Mng. & Sc. Press, Dec.30,1911, p. 834; 3000 w; 20c.

Cauldwell, F. W.—*Manganese Ore in the Caucasus.*—U. S. Consul. Rep., May7,1912; p. 497; 2000 w; 20c.

Also in Mining & Engg. World, July13, p. 65; 2000 w; 10c. Also in M. & S. P., July 27, p. 113; 2000 w; 20c.

Hahn, O. H.—*German Mining,* 1911.—E. & M. J., Jan.13,1912; p. 124; 1500 w; 25c.

de Hautpick, E.—*Russia;* [Gold and Manganese in the Caucasus].—Mng. Jnl., May 18,1912; p. 481; 2500 w; 35c.

Hoyer, —. *Beiträge zur Kenntnis der Manganerzlagerstätten in der spanischen Provinz Huelva;* [The manganese ore deposits of Huelva, Spain].—Zts. f. prakt. Geol., Dec.,1911, pp. 407-432*; 75c.

Nicholson.—*Cuba as a Mining Country.*—See under Copper.

———. *Die Ausbeute von Manganerzen in den letzten 5 Berichtsjahren;* [Manganese ore production in the last 5 years].—Erzbergbau, May15,1912; p. 170; 500 w; tables; 35c.

———. *Manganese Industry;* [World's deposits; uses].—U. S. Consul. Rep., May7, 1912; p. 502; 1500 w; 20c. Reprinted in Mining & Engg. World, June8,1912; p. 1203; 10c.

———. *Note sulla esposizione di Torino;* [Notes on the Turin exposition, 1911; Metallic ores of Brazil, Servia, Russia].—Met'l'gia Ital., Dec.,1911; pp. 796-818; 45c.

———. *Spanish Imports and Exports,*

1911.—Iron & Coal Tr. Rev., Feb.23; p. 288; 500 w; 35c.

Magnesium

Fortini, V.—*Beitrag zur Bestimmung der Magnesia in Magnesiumcarbonat und in seinen Gemischen mit Asbest;* [Calorimetric estimation of magnesia in magnesium carbonate and in asbestos mixtures].—Chemiker Ztg., March9,1912; p. 270; 500 w; 25c.

Guillet, L.—*Progresos de la metalurgia del mercurio y magnesio;* [Progress in the metallurgy of mercury and magnesia].—Revista Minera, March1,1912; p. 101; 1600 w; 35c.

Northrup, E. F.—*Resistivity Determination of Bar Magnesium by the Kelvin Double-Bridge Method.*—Met. & Cheml. Engg., May,1912; p. 277; 1600 w*; 35c.

Mercury

Drucker, K.—*Die Chloride von Zink und Quecksilber in wässiger Lösung;* [The chlorides of zinc and of mercury, and their electrolysis in watery solutions].—Zts. f. Elektrochemie, Apr.1,1912; p. 236; 7500 w*; 40c.

Eddingfield, F. T.—*Platinum, Copper and Cinnabar in the Philippines.*—Mineral Resources of Phil. I'ds., 1911; p. 36; 400 w; 65c.

Eddy, L. H.—*Quicksilver in California in* 1911.—E. & M. J., Jan.6,1912, p. 38; 1000 w; 25c.

Guillet, L.—*Progresos de la metalurgia del mercurio y magnesio;* [Progress in the metallurgy of mercury and magnesia].—Revista Minera, March1,1912; p. 101; 1600 w; 35c.

de Hautpick, E.—*Russia;* [Gold and Manganese in the Caucasus; quicksilver in the Urals].—Mng. Jnl., May18,1912; p. 481; 2500 w; 35c.

Jamieson, G. S.—*New Volumetric Method for the Determination of Mercury.*—Amer. Jnl. of Sci., April,1912; pp. 349-352; 1000 w; 65c.

McCaskey, H. D.—*Quicksilver in* 1911; [Preliminary review of production].—Mng. Sci., Jan.25,1912; 700 w; 25c. Also in Mining & Engg. World, Jan.27, p. 196; 1000 w; tables; 25c.

Müller, H. E.—*Der Quecksilberbergbau in Toskana;* [Geology, mining and metallurgy of quicksilver in Tuscany].—Glückauf, Feb. 10,1912; p. 218-229*; 50c. Abstract in Erzbergbau, Apr.15, p. 145; 1600 w; 35c.

Phillips, Wm. B.—*Quicksilver in Texas in* 1911.—E. & M. J., Jan.6,1912, p. 38; 600 w; 25c.

Pickering, A. S.—*Quicksilver* [British imports, exports, consumption, and prices. 1902 to 1911].—Mng. Jnl., Jan.13,1912, p. 53; table: 35c.

Rangel, M.—*Mineral Resources of Durango.*—See under Mexico (Durango).

Read, T.—*Mining in China.*—See China.

Schaller, W. T.—*The Properties of Mosesite;* [Mercury mineral from Terlingua, Texas].—U. S. Geol. Surv., Bull. 509; 1912; pp. 104-109; 10c.

Storms, W. H.—*Quicksilver Production of California;* [1911].—M. & S. P., March 16,1912, p. 400; 250 w; 20c.

Teleky, L.—*Die gewerbliche Quecksilbervergiftung;* [Industrial poisoning by mercury; researches made in Austria].—Berlin, 1911; 228 pp; 31 figs.; $3 (book).

———. *Mercury at Field.*—Brit. Columbia Mng., etc., Record, Nov.,1912; p. 116; 700 w; 35c.

———. *Quicksilver Works in Austria.*—Mines & Minerals, Feb.,1912; p. 427; 2000 w; 35c.

Molybdenum

See also "Special Irons & Steels," and "Ferro-Alloys," in Chapter 4.

Coolidge, W. D.—*Some Applications of Wrought Tungsten and Molybdenum.*—Jnl. of Ind'l & Engg. Chem'y, Jan.,1912, p. 3; 2500 w; 65c.

Frenzel.—*Rare Metal Industry, Colorado.*—See under Colorado.

Friederici, K.—*Die Einwirkung von Wasserstoffsuperoxyd auf die Alkalisalze der Molybdänsäure;* [Effect of hydrogen peroxide on alkaline salts of molybdic acid].—Berlin Techn. Hochschule Dissert., 1911; 66 pp.; $1 (Thesis).

Hess, F. L.—See under "Miscellaneous."

MacDonald, A. R.—*Queensland,* 1911.—See under Australia (Queensland).

Meyers, R. E.—*Commercial Manipulation of Refractory Elements for Incandescent Lamp Purposes;* [Preparation of tungsten and molybdenum].—Amer. Inst. Cheml. Engrs., Trans., Vol. III, pp. 172-187.

Masselon, E.—*Le molybdène, son emploi en métallurgie;* [Molybdenum and its use in metallurgy].—Métallurgie, Feb.21,1912, p. 116; 800 w; 35c.

Ruder, W. E.—*Solubilità del tungsteno e del molibdeno fucinati;* [Behavior of ductile tungsten and molybdenum to various acids and alkalis; from Amer. Cheml. Soc., Jnl; Vol 34, No. 4; pp. 387-389].—Rassegna Mineraria, Apr.21,1912; p. 231; 1200 w; 35c.

Walker, T. L.—*Report on the Molybdenum Ores in Canada;* [N. S.; N. B.; Que.; Ont.; B. C.; concentration methods and uses; bibliography, etc.].—Canada Dept. Mines, Report No. 93; 64 pp.*; 50c.

Abstract, chiefly on ore minerals and concentration methods, in Canadian Engr., Dec. 7, p. 641; 3000 w*; 25c. Also in Mining & Engg. World, Dec.23, p. 1277; 3200 w; 10c. Also in Mng. Sci., Feb.29, 1912; p. 206; 2500 w; 20c. Also in Queensl. Govt. Mng. Jnl., May,1912; p. 217; 3000 w; 35c.

Wood, H. E.—*Concentration of Molybdenite Ores.*—E. & M. J., Jan.27,1912, p. 227; 2000 w*; 25c.

———. *Molybdenum Prospects Not Encouraging;* [Discusses U. S. deposits].—Mining & Engg. World, Jan.27,1912; p. 180; 500 w; 10c.

Nickel

See also "Special Irons & Steels" and "Ferro-Alloys," in Chapter 4.

See also Electroplating, Chapter 11.

Bancroft, H.—*A Nickel Deposit in the San Poil Mining District, Washington.*—M.& S. P., Jan.20,1912, p. 144; 1800 w; 20c.

Barth, O.—*Verarbeitung einer gerösteten bleireichen Kobalt-Nickelspeise;* [Treatment of a roasted cobalt-nickel speiss rich in lead].—Metallurgie, March22,1912; p. 199-216*; 50c.

English abstract in Soc. of Cheml. Ind'y, Jnl., May,1912; 500 w; 65c. Reprinted in E. & M. J., June1, p. 1096; 500 w; 25c.

Browne, D. H.—*Recent Improvements*

and Additions to the Smelting Plant of the Canadian Copper Co.—Canadian Mng. Inst., Bull. 18, Feb.,1912; p. 33; 2800 w; $1.20. Reprinted in Mining & Engg. World, March16. p. 597; 10c.

Du Toit, A. L.—*The Copper-Nickel Deposits of the Insizwa, East Griqualand;* [Abstract from report to Cape Geol. Commission].—S. Afr. Mng. Jnl., March9,1912; p. 19; 2000 w; 35c.

Fink, C. G.—*Vacuum Furnace Metallurgy;* [Tests on some complex Canadian cobalt-silver-nickel ores; read to Amer. Electrocheml. Soc., April,1912; abstract].—Met. & Cheml. Engg., May,1912; p. 296; 1000 w; 35c.

Freidrich, K. and A. Leroux.—*Arsenides;* [in German].—See under Thermic Metallurgy.

Gaines, R. H.—*Monel Metal;* [Nickel-copper matte, primary smelt].—See under "Alloys."

Gibson, T. W.—*Ontario,* 1911.—See Ontario.

Gray, Alex.—*Ontario Nickel Industry in* 1911.—Mng. Jnl., Jan.27,1912; p. 85; 1500 w; 35c.

Hess, F. L.—See under "Miscellaneous."

Lecouteux, G.—*Role du persulfate d'ammoniaque dans les bains de nickelage;* [Role of ammonium persulphate in nickel-plating solutions].—Bull. Techniq. du Nord, Feb.-March,1912; p. 36; 500 w; 75c.

Orthey, M.—*Bestimmung des Kohlenstoffs im Nickel;* [Estimation of carbon in commercial nickel].—Giesserei Ztg., Apr. 15,1912; p. 237; 2000 w; 40c.

Read, T.—*Mining in China.*—See China.

Ruff, O. and W. Martin.—*Ueber die Löslichkeit von Kohlenstoff in Nickel;* [Solubility of carbon in nickel.].—Metallurgie, Feb.22,1912, p. 143; 4000 w*; 50c.

Uglow, W. L.—*The Alexo Mine; A New Nickel Occurrence in Northern Ontario.*—Canadian Mng. Inst., Jnl., No. 16, Oct.,1911; pp. 151-173*; $1.20.

Wogrinz, A. and J. Kittel.—*Ueber die Bestimmung von Borsäure in Nickelbädern;* [Estimation of borates in electrolytic nickel baths].—Chemiker Ztg., Apr.18,1912; p. 433; 2500 w; 35c.

———. *L'année commerciale* 1911; [Review of mining and metallurgy in New Caledonia in 1911].—Bull. du Commerce N. Calédonie, Apr.6,1912; p. 1-4; 35c. Abstract in Echo d. Mines, June3, p. 642; 1000 w; 35c.

———. *L'Exploitation de la Société de Nickel de Thio;* [Thio nickel smelter and mining developments, New Caledonia].—Bull. du Commerce de N. Calédonie, Feb. 17,1912, Supplement; 300 w; 35c. Abstract in Mining & Engg. World, Apr.20, p. —; 200 w; 10c.

———. *La situation minière de la Nouvelle Calédonie;* [Mining in New Caledonia in 1910; abstract from report of French minister of colonies].—Echo d. Mines, Oct. 12,1911, p. 1015; 2000 w; 35c. Reprint in Jnl. du Four Electriq., Oct.15, p. 988; 2000 w; 35c. Also in Soc. Amicale d.... Mineurs de Douai, Bill., Nov.25,1911; pp. 754-761; 35c.

———. *Nickel in Canada in* 1911.—M. & S. P., May11,1912; p. 662; 300 w; 20c.

———. *Schwarze Nickelüberzüge;* [Black nickel plate].—SW. Deu. Industrie Ztg., March5,1912; p. 118; 1000 w; 35c.

Niobium

See Tantalum.

Osmium and Palladium

See Platinum.

Platinum

Crookes, Sir Wm.—*Volatility of Metals of the Platinum Group;* [Read to Roy. Soc. in March, 1912; brief abstract].—Met. & Cheml. Engg., May,1912; p. 302; 500 w; 35c. Also in Mining & Engg. World, Aug. 10,1912; 500 w; 10c.

Dart, A. C.—*Assay of Ores Containing the Platinum Group of Metals;* [at Rambler mine, Wyoming].—Met. & Cheml. Engg., April,1912; p. 219; 750 w; 35c. Abstract in Mining & Engg. World, July13, p. 57; 600 w; 10c.

Dewey, F. P.—*Direct Determination of Small Amounts of Platinum in Ores and Bullion.*—Amer. Inst. Mng. Engrs., Bull. 64, Apr., 1912; pp. 439-442; $1.15. Abstract in Mining & Engg. World, March2, p. 502; 9, p. 519; 800 w; 25c. Also in Mng. Sci., March21, p. 274; 1500 w; 20c. Also in Jnl. of Ind'l & Engg. Chem'y, April,1912; p. 257; 1500 w; 65c. Also in M. & S. P., July 20, p. 87; 750 w; 10c.

Duparc, L. and H. C. Holtz.—*Notiz über die chemische Zusammensetzung einiger Platinerze aus dem Ural;* [Chemical composition of some platinum ores from the Urals].—Mineralog. & Petrogr. Mitlngn (Tschermak's), Vol. 29, for 1910; pp. 498-504; 75c.

Duparc, L.—*Le platine et les gîtes platinifères de l'Oural;* [Platinum and the platinum deposits of the Urals].—Archives d. Sci. Physiq. & Naturelles (Geneva), Vol. 31; March-June,1911; 80 pp*; $2.

Brief review in Econ. Geol'y, Feb.-March, 1912; p. 202; 750 w; 65c.

Eddingfield, F. T.—*Platinum, Copper and Cinnabar in the Philippines.*—Mineral Resources of Phil. I'ds., 1911; p. 36; 400 w; 65c.

Gutbier, A. and others.—*Neue Untersuchungen über das Osmium;* [Newer researches on osmium and its preparation; read to Chem. Ges. zu Erlangen, Nov.24,1911; brief abstract].—Chemiker Ztg., Jan.16,1912; p. 60; 500 w; 35c. Also in English in Mining & Engg. World, March9,1912, p. 550; 500 w; 10c.

Hobart, F.—*Gold, Silver and Platinum in* 1911; [General review of production].—E. & M. J., Jan.6,1912, p. 3; 2100 w; 25c.

Holtz, H. C.—*La composition des principaux minerais de platine de l'Oural;* [Composition of the chief platinum ores of the Urals].—Univ. of Geneva Dissertation; 1911; 66 pp.; (thesis).

Hutchins.—*Russian Empire in* 1911.—See under Asia (Russia-in-Asia).

Liddell, D. M.—*Treating Metal Junk.*—E. & M. J., March2, p. 452; 4000 w*; 25c.

Lindgren, W.—*The Congeners of Platinum;* [Uses of metals of platinum group; from U. S. Geol. Survey, Mineral Resources for 1910].—Mng. Sci., Jan.11,1912, p. 26; 1000 w; 20c.

McLaren, Alex.—*Gold and Rare Metal Mining near Llano, Texas;* [Gold-platinum-bismuth].—Mng. Scl., May2,1912; p. 394; 300 w*; 20c. Also in Salt Lake Mng. Rev., May15, p. 11; 2000 w*; 25c.

Molinié, M., and H. Dietz.—*L'Argent et les Métaux de la Mine de Platine;* [Silver and the platinum metals; their occurrences, metallurgy, and industrial uses].—Paris, 1912; pp. 399; 93 figs; $2 (book).

Perret, L.—*Gold and Platinum Alluvial Deposits in Russia;* [Methods of prospect-

ing and working].—Instn. of Mng. & Met'l'gy, Bull. 92, May,1912; 34 pp*; 50c.
Abstract on "Prospecting Frozen Alluvial Deposits," in Mining & Engg. World, June 15, p. 1247; 4000 w*; 10c. Also in Mng. Scl., June20, p. 529; 2000 w; 20c.

Piña de Rubies, S.—*Composition of the Platiniferous Dunite of the Urals* [in Spanish; read to Soc. Española de Fisica y Quimica; brief abstract in German in] Chemiker Ztg., Jan.4,1912, p. 17; 250 w; 25c. Also in English in Mining & Engg. World, March9,1912, p. 550; 250 w; 10c.

Priwoznik, E.—*Ueber Platin;* [The mining, metallurgy and uses of platinum].—Oestr. Zts. f. Berg- & H-wesen, March16, 1912; p. 143; March23, p. 155; 7000 w; 75c.

Trenkner, —. *Die quantitätive Bestimmung der Edelmetalle Gold, Silber, Platin;* [Quantitative estimation of gold, silver, platinum].—Metallurgie, Feb.8,1912; p. 103; 1500 w; 50c.

———. *S. America in* 1911.—E. & M. J., Jan.6,1912; p. 82; 2000 w; 25c.

———. *A New Canadian Metal;* [Canadium of platinum group from Nelson district, B. C.].—Mining & Engg. World, Dec. 23,1911, p. 1281; 300 w; 10c.

———. *Canadium.*—Engg. Record, Jan. 13,1912, p. 30; 750 w; 20c.

———. *Colombian Platinum.*—Mng. Jnl., Apr.20,1912; p. 373; 500 w; 35c.

———. *L'industrie du platine dans l'Oural en* 1911; [Platinum production in the Urals in 1911].—Métallurgie, March13, 1912; p. 164; 300 w; 35c.

———. *Platinum in Colombia.*—Mng. Jnl., May18,1912; p. 477; 1800 w; 35c.

———. *Platinum at Nelson, British Columbia;* [Refutation of alleged workable deposits].—B. C. Mng. & Engg. Record, March,1912; p. 227; 600 w; 35c.

———. *Platinum in* 1911; [Review of U. S. production and prices].—Mining & Engg. World, Jan.27,1912; p. 155; 750 w; 10c.

———. *Russian Platinum Production in* 1911.—M. & S. P., March16,1912, p. 411; 500 w; 20c.

———. *The Reported Platinum Deposits at Nelson, B. C.*—Brit. Columbia Mng. & Engg. Record, Oct.,1911, p. 76; 2100 w; 35c.

———. *The Russian Government Platinum Monopoly.*—Mining & Engg. World, Apr.13,1912; p. 820; 1500 w; 10c.
Abstract in German in Zentral Verbd. Bergbau Betriebsl. Oestr. Zts.; June15, p. 370; 1800 w; 35c.

Radium and Radio-actives

See also Uranium.

Barss, W. R.—*Note on Measurements of Radio-Activity by Means of Alpha-Rays.*—Amer. Jnl. of Sci., June,1912; pp. 546-550; 65c.

Bayet, A.—*Das Radium; seine therapeutische Wirkung;* [Radium; its Therapeutic Qualities; German translation by E. Schiff from the French].—Vienna, 1912; 105 pp; $1.25 (book).

Beyschlag, Krusch and Vogt.—*Monograph of Ore Deposits;* [in German].—See under Gold.

Curie, Mme. P.—*Die Entdeckung des Radiums;* [The discovery of radium; address at Stockholm, Dec.11,1911, upon award of Nobel prize].—Leipzig, 1912; 28 pp; 5 figs; 75c (pamphlet).

Danne, J.—*Le laboratoire d'essais des substances radioactives à Gif, Seine-et-Loire;* [The testing laboratory for radioactive materials at Gif, France].—Génie Civil, Feb.24,1912; p. 321; 5000 w*; 50c.

Ebler, E.—*Ueber die Bestimmung des Radiums in Mineralien und Gesteinen;* [The estimation of radium in minerals and in rocks; read to Deu. Bunsen Ges., abstract].—Chemiker Ztg., May30,1912; p. 604; 500 w; 30c.

Friz, W.—*Radium in der Nahe von Odessa;* [Discusses work of Sokoloff and others on salt lakes near Odessa and their radium emanations].—Techn. Blätter, Apr. 27,1912; p. 129; 2000 w; 35c.

Fraga, E.—*Radioaktivität der Heilquellen Chiles;* [Radioactivity of the healing springs of Chile].—Leipzig, 1911; pp. —; 75c (pamphlet).

Gee, L. C. E.—*Uranium Radio-Active-Ores and Other Rare Metals and Minerals in South Australia.*—S. Australia Dept. Mines Publication; 1911; 12 pp.; 50c.
German abstract in Eisen Ztg., Feb.3, 1912; p. 80; 600 w; 35c. Also in Erzbergbau, Apr.1, p. 129; 600 w; 35c.
Italian abstract in Rassegna Mineraria, March21,1912; p. 175; 1000 w; 35c.

de Hautpick, E.—*Radium Researches;* [Reviews Sokoloff's work on Hadzhibey and Kouljalnik salt lakes].—Mng. Jnl., May4, 1912; p. 452; 1000 w; 35c.

Henrich, F., and G. Bugge.—*Beiträge zur Kenntnis der Quellenabsätze (Sinter) der Wiesbadener Thermalquellen;* [The solid constituents of the Wiesbaden radioactive thermal springs].—Chemiker Ztg., Apr.27, 1912; p. 473; 800 w; 35c.

Henrich and Glazer—*Ueber die gebräuchlichen Apparate zur Bestimmung der Radioaktivität von Quellen;* [Necessary apparatus for determining the radioactivity of springs].—Zts. f. angew. Chemie, Jan.5, 1912; p. 16-19; 75c.

Jones, H. C.—*A Discussion of Radio-Chemistry.*—E. & M. J., June8,1912; p. 1137; 7000 w; 25c.

Laur, F.—*Il faut chercher des minerais de radium;* [The necessity of discovering new sources and new deposits of radium ores].—Echo d. Mines, Apr.29,1912; p. 522; 1800 w; 35c.

Lieber, H.—*Modern Uses and Applications of Radium.*—Franklin Inst., Jnl., Dec., 1911, p. 570-590; 65c. Abstract in Mining & Engg. World, Dec.30,1911, p. 1317; 4200 w; 10c.

Schiffner, C.—*Radium Minerals of Saxony and Their Discovery;* [Translated from the German, in abstract].—Mining & Engg. World, June15,1912; p. 1243; 3500 w; 10c.

Schwerdtner, H.—*Der Radiumkurort St. Joachimsthal;* [The radio-therapeutic sanitarium in St. Joachimsthal, Austria].—Oestr. Zts. f. Berg- & H-wesen, March9, 1912; p. 135; 2000 w; 45c.

Soddy, Fr.—*The Chemistry of the Radio-Elements.*—London, 1912; pp. —; $1 (book).

Soddy, Fred.—*The Origin of Radium;* [Lecture before the Royal Institution, London; abstract].—Engnrg., March22,1912; p. 389; 3500 w; 30c. Also in Electrician, March22, p. 977; 2000 w; 35c.

Weszelszky, J. and R. Frohner.—*Ueber Radioaktivität der warmen Quellen von Budapest;* [Radioactvity of the thermal springs at and about Budapest; read to Akad. d. Wiss., Budapest, Jan.,1912; brief abstract].—Chemiker Ztg., March23,1912; p. 325; 200 w; 30c.

Rhodium

See Platinum.

Selenium; Tellurium

Fenaroli, R.—[*Use of selenium as colorant in soda-lime-silicate glassware;* in Italian].—Soc. Chimica Ital.; read to Milan section, Dec.2,1911; pp. —; $1.

Hess, F. L.—*The Production of Antimony, Arsenic, Bismuth and Selenium in* 1910.—U. S. Geol. Survey, Mineral Resources f. 1910; 1911; 10 pp.; 10c.

Klason, P.—*Dosage volumétrique du sélénium;* [Volumetric estimation of selenium; from Wochenbl. Papierfabr., Vol. 41, pp. 545-6; 1910].—Rev. de Métallurgie, March, 1912; p. 102; 300 w; $1.15.

Klason, P.—*Ueber ein neues Verfahren zur Bestimmung von Selen in Schwefel und Schwefelkies;* [New process of selenium estimation in sulphur and pyrite; read to Ver. d. Zellstoff- u. Papier-Chemiker. Berlin, Nov.,1911].—Chemiker Ztg., Dec.5,1911, p. 1345; 500 w; 30c.

Kobayashi.—*Zinc-Tellurium Alloys* (in German).—See Alloys.

Weber, M. G.—*Kritische Studien über die Darstellungsweisen von Selen- und Tellurwasserstoff;* [Methods of production of hydrogen selenides and tellurides].—Dresden Techn. Hochschule dissert., 1911; pp. —; (thesis).

Silver

CANADA-ALASKA

Cole, A. A.—*The Mining Industry in that Part of Northern Ontario Served by the T. & N. O. Ry.*—Toronto, 1912; 57 pp.*; 75c.

Colvocoresses, G. M.—*Gowganda During* 1911.—Canadian Mng. Jnl., Apr.15,1912; p. 256; 3500 w*; 25c.

Dushman, S.—*Gold and Silver Production in Canada.*—M. & S. P., Dec.30,1911, p. 833; 1000 w; 25c.

Emmons, S. F.—*Cobalt District, Ontario.*—"Types of Ore Deposits," by H. F. Bain. and others; 1911; pp. 140-156*.

Reprinted from Mng. & Sc. Press, March 18,1911; [An address read to Geol. Soc. of Washington, Jan.26,1910].

Fowler, S. S. —*Costs and Cost-Conditions at Bluebell Mine, B. C.*—Canadian Mng. Inst., Bull. 18, Feb.,1912; p. 3-12; $1.20.

Gibson, T. W.—*Ontario,* 1911.—See Ontario.

Gray, Alex.—*What Cobalt Silver Mines Have Done;* [Review for 1911].—Mng. Jnl., Jan.20,1912; p. 63; 5000 w; 35c.

Gray, Alex.—*Northern Ontario Silver* Mines in 1911.—Mng. Jnl., Jan.6,1912, p. 25; 1600 w; 35c.

Haultain, H. E. T.—*Silver and Gold Mining in Ontario;* [Review for 1911].—Canadian Engr., Jan.11,1912, p. 143; 1000 w; 30c.

Hedley, R. R.—*British Columbia in* 1911.—See under Br. Columbia.

Hore, R. E.—*The Silver Fields of Nipissing.*—Canadian Mng. Inst., Bull. 17, Dec., 1911, pp. 81-106*; $1.20.

Hughes, Ben.—*Northern Ontario, The Land of Promise.*—Canadian Mng. Jnl., March1,1912, p. 150; 2600 w; 25c.

Hughes, B.—*Review of Mining in Foreign Countries in* 1911; *Ontario* [Cobalt and Porcupine].—Mining & Engg. World, Jan. 27,1912; p. 267; 4500 w; 25c.

Jacobs, E.—*Review of Mining and Production in British Columbia in* 1911.—Canadian Mng. Jnl., Jan.1,1912; p. 7; 1500 w; 25c. Also in M. & S. P., Jan.6,1912, p. 68; 3000 w; 35c. Also in E. & M. J., Jan.6, p. 75; 2000 w; 35c. Also in Mining & Engg. World, Jan.27, p. 261; 7000 w; 25c.

Knight, C. W.—*Recent Underground Work at Cobalt;* [Geology of silver deposits].—Canadian Mng. Inst., Bull. 18, Feb., 1912; p. 21; 2200 w*; $1.20.

Knight, C. W.—*Geology of the Cobalt District, Ontario;* [Critical notes on Hore's earlier paper].—Amer. Inst. Mng. Engrs., Bull. 60, Dec.,1911, p. 1035; 1000 w; $1.15.

Martin, G. C. and F. J. Katz.—*A Geologic Reconnaissance of the Iliamna Region, Alaska.*—U. S. Geol. Surv., Bull. 485; 1912; 138 pp*; 10c.

Robertson, W. F.—*British Columbia,* 1911.—See under Br. Columbia.

Vallance, J.—*Standard Mine.*—See Br. Columbia.

———. *Cons. Mng. & Smltg. Co., Trail Smelter Output,* 1911.—See under Lead.

———. *Mines of Tepic.*—El Paso Mng. Jnl., Feb.,1912; p. 15; 1000 w; 25c.

———. *Slocan Star Mines, Ltd., Slocan, B. C.*—Brit. Columbia Mng., etc., Record, Oct.,1911, p. 88; 1800 w*; 35c.

———. *Ymir Camp.*—See Br. Columbia.

UNITED STATES

Adamson.—*Nevada,* 1911.—See Nevada.

Bell.—*13th Annual Idaho Report.*—See under Idaho.

Bell, R. N.—*Mines and Mills of Shoshone County, Idaho;* [From 13th annual report of state mine inspector].—Mining & Engg. World, Apr.6,1912; p. 769; 3200 w*; 10c.

Bell, R. N.—*Lead and Silver Resources of Lemhi County, Idaho;* [Extract from 13th annual report].—Mng. Sci., May9,1912; p. 406; May16, p. 431; 4500 w*; 30c.

Breen, L. A.—*Gold and Silver Production During* 1911.—Mng. Sci., Jan.25,1912, p. 63; 2800 w*; 25c.

Butler and Dunlop.—*Metal Production in the Central States,* 1911.—See under Lead.

Collins.—*Colorado,* 1911.—See Colorado.

Copenharve.—*Montana,* 1911.—See Montana.

Fisher, F. L.—*Montana,* 1911.—See Montana.

Hall, F.—*Colorado,* 1911.—See Colorado.

Heikes, etc.—*Metal Production in Western and Alaskan Mines,* 1910.—See under U. S.

Henahen.—*Colorado,* 1911.—See Colorado.

Hershey, O. H.—*Genesis of Lead-Silver Ores in Wardner District, Idaho.*—M. & S. P., June1,1912; p. 750; June8, p. 786; June 15, p. 825; 11,000 w*; 45c.

Hobart, F.—*Gold, Silver and Platinum in* 1911; [General review of production].—E. & M. J., Jan.6,1912, p. 3; 2100 w; 35c.

Humphreys, L. — *The Commonwealth Mine;* [Turquoise district, Arizona].—M. & S. P., June8,1912; p. 798; 1200 w; 20c.

Huston, Geo.—*Review of Mining in the U. S. in* 1911; *Coeur d'Alenes.*—Mining & Engg. World, Jan.27,1912; p. 214; 1000 w; 25c.

Huston, Geo.—*The "Dry Ore Belt" Be-*

tween Wallace and Wardner, Idaho.—Mng. Sci., Jan.4,1912, p. 4; 1000 w; 20c.

Jamison.—*Wyoming.* 1911.—See Wyoming.

Locke, Aug.—*Geology of the Tonopah Mining District.*—Amer. Inst. Mng. Engrs., Trans. for October,1911; 3000 w*; $1.15.

Abstract in M. & S. P., Oct.21,1911, p. 523; 2500 w*; 20c. Also in Mining & Engg. World, Dec.23, p. 1271; 2700 w*; 10c. Also in Mng. Sci., March28, p. 286; 2800 w*; 20c.

Martin.—*California,* 1911.—See Calif.

McCaskey, H. D.—*The Production of Gold and Silver in* 1910 [in U. S., review by states].—U. S. Geol. Survey, Mineral Resources f. 1910; 1911; 39 pp; 10c.

McGee, G. T.—*Gold-Silver Mines of Montana;* [Review for 1911].—M. & S. P., Jan. 6,1912, p. 83; 2000 w*; 35c.

O'Connell, Chas. A.—*The Future of Cobalt;* [Abstract; read to Canadian Mng. Inst.].—Mng. & Sc. Press, March23,1912; p. 429; 1200 w*; 20c.

Palmer, L. A.—*Mining on the East Side of Tintic District, Utah.*—Salt Lake Mng. Rev., Apr.15,1912; p. 11; 3200 w*; 25c.

Parks, H. M.—*Resources of Oregon.*—See under Oregon.

Perkins, E.—*Arizona,* 1911.—See Arizona.

Pickard, B. O.—*The Apache Mines of the Owl Head District, Arizona;* [Chiefly silver].—Mng. Sci., May30,1912; p. 473; 3000 w; 20c.

Ralston, O. C.—*Costs of Milling in Leadville, Colo.*—Mines & Minerals, May,1912; p. 619; 750 w; 35c.

Ralston, O. C.—*Leadville, Colo., Fissure Veins.*—Mines & Minerals, Apr.,1912; p. 549; 1000 w; 35c.

Reagan, A.—*Ft. Apache District.*—See Arizona.

Rice, S.—*Progress in the Coeur d'Alene District, Idaho.*—Mining & Engg. World, June1,1912; p. 1185; 2500 w*; 10c.

Scott, W.—*Idaho,* 1911.—See Idaho.

Scott, W. A.—*Utah,* 1911.—See Utah.

Stoneham, W. J.—*Nevada,* 1911.—See Nevada.

Tolman, C. F.—*Arizona,* 1911.—See Arizona.

Walsh, Wm.—*Montana Ranks High As a Metal Producer;* [Annual report for 1911].—Mining & Engg. World, Dec.16,1911, p. 1217; 2200 w; 10c.

Walter, P.—*New Mexico,* 1911.—See N. Mex.

Winchell, H. V., and A. N.—*Notes on the Blue Bird Mine;* [Geology of silver ores accompanied by tourmaline; Wickes, Montana].—Econ. Geol'y, April-May,1912; p. 287-294*; 65c.

Zalinski, E. R.—*Notes on Pioche, Nevada.*—E. & M. J., March23,1912; p. 604; 1500 w; 25c.

Zalinski, E.—*Utah,* 1911.—See Utah.

Zehring, W.—*Utah,* 1911.—See Utah.

———. *Gold and Silver Production of the U. S.;* [Review for 1911].—Mining & Engg. World, Jan.27,1912; p. 156; 2500 w; tables; 10c. Also in M. & S. P., Jan.6, p. 6; 1000 w; table; 35c.

———. *Idaho,* 1911.—Mining & Engg. World, Jan.27,1912; p. 213; 1500 w; 10c.

———. *Mining in Nevada in* 1911.—E. & M. J., Jan.6,1912; p. 67; 3000 w; 25c.

———. *Operations at the McKinley-Darragh Mine, Cobalt, Ont.;* [in 1911; from annual report].—Mining & Engg. World, Apr.27, 1912; p. 905; 1000 w*; 10c.

———. *Report of the Tonopah-Belmont Development Co.;* [Includes new flow-sheet of Belmont mill, March1,1912].—M. & S. P., May4,1912; p. 624; 2000 w*; 20c.

———. *Tonopah Mines and Mining;* [History and present status; from "Tonopah Miner," special issue, May25,1912].—M. & S. P., June1,1912; p. 749; 1000 w; 20c. Also in Mng. & Oil Rev., June, p. 4-8; 4000 w; 35c.

———. *Work of the Tonopah Mining Co.* [Summary of 10th annual report for 1911].—M. & S. P., May25,1912; p. 722; 2000 w; 20c.

MEXICO

See also Mexico, Chapter 2.

Bayliss, R. T.—*Conditions at El Oro.*—E. & M. J., Jan.20,1912, p. 163; 1500 w; 25c.

Boddington, H. D.—*Mineral District of Rayon, Chihuahua.*—Mex. Mng. Jnl., Feb., 1912; p. 19; 1800 w*; 25c. Abstract in Mines & Minerals, May,1912; p. 605; 1000 w;* 35c.

Brady, A. C.—*Review of Mining in Foreign Countries in* 1911; *Mexico* [Sonora, by J. I. Cohn].—Mining & Engg. World, Jan.27,1912; p. 249-261; 15,000 w; 25c.

Brady, A. C.—*Mining at Guanajuato in* 1911.—E. & M. J., Jan.6,1912, p. 80; 1200 w; 25c.

Brady, A. C.—*Mining in Jalisco in* 1911.—E. & M. J., Jan.13,1912, p. 125; 1300 w; 25c.

Capilla, A.—*Deposito de antiguos aluviones argentiferos en el rio de Santiago, Jalisco;* [Some silver placer deposits, Santiago river, Jalisco].—Soc. Geol. Mex., Bol.; Vol. 7, N. 2, p. 135-139; 2000 w; $2.

Gonzalez, F., A. Grothe, and L. Salazar.—*The Mining Industry of Mexico; No.* 2: *State of Hidalgo, Part* 2.—Mexico City, 1911; 108 pp*; $1.50.

Graham, S. N.—*Some Old Methods in Mexican Mining and Metallurgy.*—Canadian Mng. Jnl., May1,1912; p. 308; 1000 w*; 25c.

Holt, E. B.—*The Noria District, Sonora.*—Mex. Mng. Jnl., Feb.,1912; p. 31; 2500 w*; 25c.

Hough, G. J.—*An Old Treasure Town;* [Old silver mines about Ramos, Mex.].—M. & S. P., Dec.30,1911, p. 836; 1600 w*; 20c.

Lakes, H.—*Prospecting Conditions Found in Portions of Sonora;* [West coast gold and silver belts].—Mining & Engg. World, Jan.13,1912; p. 110; 1500 w; 10c.

Lord, P. B. and Y. S. Bonillas.—*Algunos criaderos argentiferos de cerca de Reyes, Durango;* [The silver ore deposits of the Bonanza Mng. Co. mines and vicinity, Reyes, Durango].—Soc. Geol. Mex., Bol.; Vol. 7, No. 2; p. 149; 1200 w*; $2.

Marshall, T. R.—*Operations of the Taxco Mines of Mexico, Ltd.*—Mining & Engg. World, Jan.13,1912; p. 72; 2000 w; 10c.

MacCoy, F.—*El Oro District in* 1911.—E. & M. J., Jan.6,1912, p. 81; 400 w; 25c.

Pearce, W. D.—*The Cusihuiriachic District of Chihuahua, Mexico.*—Mining & Engg. World, Jan.6,1912, p. 19; 1600 w*; 10c.

Rangel, M.—*Mineral Resources of Durango.*—See under Mexico (Durango).

Roldán, L. V.—*Estudio geologico y minero de la sierra de El Oro;* [Geology of the

ore deposits of the El Oro range, Durango].—Soc. Geol. Mex., Bol.; Vol. 7, No. 2; pp. 125-134; $2.

Scaife, H. L.—*Zacualpan;* [The ancient gold-silver mines of the Zacualpan district, state of Mexico].—Mex. Inst. Mng. & Met'gy, Trans. Vol. 2, No. 5; p. 164; 1500 w; 65c.

Sheldon, G.—*Alamos District.*—See Sonora.

Sheldon, G. L.—*The Mocorito District in Sinaloa;* [Silver-gold].—E. &. M. J., June 1,1912; p. 1092; 700 w; 25c.

Sheldon, G. L.—*The Sinaloa Mining District, Sinaloa, Mex.*—M. & S. P., Dec.23, 1911, p. 803; 1000 w*; 20c.

Workman, C. W.—*Some Features of Mining in Mexico;* [Silver mining and metallurgic practice, past and present, in Guanajuato and in Etzatlan district, Jalisco].—Canadian Mng. Jnl., May1,1912; p. 305; 3200 w; 25c.

———. *Industries in the Territory of Tepic.*—El Paso Mng. Jnl., Apr.,1912; p. 20; 3000 w; 35c.

———. *Mines in Northern Sinaloa.*—M. & S. P., Apr.27,1912; p. 591; 500 w*; 25c.

———. *Oaxaca in* 1911.—E. & M. J., Jan.6,1912; p. 79; 1000 w; 25c.

———. *Review of Mexican Output,* 1911.—Mex. Mng. Jnl., Jan.,1912; p. 15; 2100 w; 35c.

———. *Rio Plata Mining Co.;* [Chihuahua; report for 1911].—E. & M. J., Apr.27, 1912; p. 842; 500 w; 25c.

———. *Taviche;* [Silver-gold district, southern Oaxaca].—M. & S. P., March30, 1912; p. 474; 700 w; 20c.

———. *The Sinaloa Mining District.*—El Paso Mng. Jnl., Apr.,1912; p. 23; 1200 w; 35c.

———. *Work of the Amparo Mining Co.;* [Silver-gold; Jalisco, Mex.; abstract of report for 1911].—M. & S. P., June 8, 1912; p. 793; p. 792; 1000 w; tables; 20c.

———. *Zur Entwickelung des Erzbergbaues in Mexiko;* [Costs and practice at a copper-gold-silver mine and mill in Durango].—Erzbergbau, Apr.15,1912; p. 142; 1600 w*; 35c.

CENTRAL AND SOUTH AMERICA

Carter, T. L.—*Central American Mines in* 1911; [Nicaragua, Honduras, Guatemala; chiefly gold-silver].—M. & S. P., Jan.6,1912, p. 60; 2000 w; 35c.

Haeberle, A. T.—*Honduras.* See under Central America.

Hermitte.—*La Concordia Mine.*—See under Argentina.

———. *S. America in* 1911.—E. & M. J., Jan.6,1912; p. 82; 2000 w; 25c.

EUROPE

Delmer.—*Belgian Mining and Metallurgy,* 1901-1910. See under Zinc.

Suchy, G.—*Die Erzlagerstätte von Altenberg in Schlesien nebst einer Uebersicht über das Bober-Katzbach-Gebirge;* [The ore deposits (gold-silver) of Altenberg, Silesia, and a review of the Bober-Katzbach range].—Kohle & Erz, May13,1912; p. 506; May20, p. 530; 6000 w*; 50c.

AFRICA

Marriott.—*Rhodesia,* 1911.—See Rhodesia.

ASIA

Bain.—*Japan Mineral Production.*—See Japan.

Read, T.—*Mining in China.*—See China.

Knox.—*Formosa.*—See under Japan.

AUSTRALIA

Brown, F. C.—*New Zealand and Nevada Mining Methods Compared;* [Compares wages, labor conditions and some details of practice].—M. & S. P., Jan.13,1912, p. 104; 1800 w; 20c.

Clark, D.—*Australian Mining and Metallurgy.*—Melbourne, 1911; 600 pp.*; $6.50 (book).

MacDonald, A. R.—*Queensland,* 1911.—See under Australia (Queensland).

Mance.—*Australasia,* 1911.—See Australia.

Pittmann.—*New South Wales,* 1911.—See Tin.

Plummer, J.—*Increased Australian Silver Production in* 1911.—Mining & Engg. World, June1,1912; p. 1153; 1500 w; 10c.

———. *Australasian Mining,* 1911.—M. & S. P., Jan.6,1912; p. 56; 2400 w*; 35c.

———. *South Australia, July-Dec.,* 1911.—Mng. Jnl., May4,1912; p. 426; 35c.

CYANIDING

See "Mill and Milling," Chapter 10.

METALLURGY; CHEMISTRY

See also "Thermic Metallurgy" and "Assaying and Chemistry," Chapter 11.

Argall, P. H.—*Colorado Metallurgical Progress;* [Review for 1911].—M. & S. P., Jan.6,1912, p. 78; 3200 w*; 35c.

Ashcroft, E. A.—*Chlorination Process for Complex Ores;* [Reviews Ashcroft's recent patents].—Met. & Chemi. Engg., Feb.,1912, p. 117; 2,000 w*; 35c.

Austin, L. S.—*Silver-Lead Smelting.*—M. & S. P., Jan.6,1912, p. 20; 1500 w; 35c.

Austin, W. L.—*Leaching Applied to Copper Ore; XVI: Recovery of Silver and Gold Content;* [Cyaniding and other processes].—Mines & Methods, March,1912; p. 433; 5000 w; 20c. Abstract in Mex. Mng. Jnl., June, p. 36; 4500 w; 25c.

Benner, R. C. and M. L. Hartmann.—*The Early History of Cupellation.*—M. & S. P., Apr.6,1912; p. 501; 1800 w; 20c.

Brown, J. L. R.—*Purity a Requisite for Silver Electroplating Anodes;* [Read to Natnl. Electroplaters' Asso.; abstract].—Met. & Chemi. Engg., March,1912; p. 184; 1600 w; 35c.

Brownlee, A. G.—[*Malm Process for Complex Ores*].—See under Lead.

Clark, D.—*Australian Mining and Metallurgy.*—Melbourne, 1911; 600 pp.*; $6.50 (book).

Coghill, W. H.—*Refractory Manganese-Silver Ores;* [Cyaniding tests on Arizona, Durango and Jalisco ores].—M. & S. P., June1,1912; p. 754; June8, p. 794; 9000 w; 30c.

Denny, G. A.—*Cyanidation vs. Concentration* [on Pachuca ores].—Mng. Mag., Dec., 1911, p. 433; 750 w; 35c.

Denny, G. A.—*Concentration vs. Cyanidation.*—Mng. Mag., April,1912; p. 293; 2700 w; 45c.

Diener, F.—*Der Pfingstausflug nach*

Sachsen; [Excursion of the Bochum (Pfingsten) Mining School to the Freiberg mines and smelters, Saxony].—Bergbau, Feb.22, 1912, p. 105; 1500 w; 35c.

Downer, F .M.—*The Denver Mint and Its Operation;* [Read to Colo. Electric Club].—Mng. Sci., May16,1912; p. 426; 1400 w; 20c.

Durham, E. B.—*Electrolytic Refining at the U. S. Mint, San Francisco, Cal.;* [Silver, gold, platiniferous copper].—Amer. Inst. of Mng. Engrs., Trans. for Oct.,1911, pp. 811-838*; $1.15.

Abstract in E. & M. J., Nov.4, p. 901; Nov. 11, p. 950; 6500 w*; 45c. Also in Mines & Minerals, Jan.,1912, p. 361; 5000 w*; 35c. Abstract on silver refining, Mining & Engg. World, Nov.18, p. 1010; 2800 w*; 10c.

Fink, C. G.—*Vacuum Furnace Metallurgy;* [Tests on some complex smaltite ores of Canada].—Read to Amer. Electrochem. Soc., April, 1912; abstract].—Met. & Cheml. Engg., May,1912; p. 296; 1000 w; 35c.

Freidrich, K.—*Zur Quantitativen Bestimmung minimaler Mengen von Silber und Gold;* [Quantitative estimation of minute quantities of gold and silver].—Inst. f. Metallographie & Probierkunde an Freiberg; Mittingn. f. 1910; pp. 68-72; $3.20.

Friedrich, K. and A. Leroux.—*Arsenides and Smelter Compounds* [in German].—See Thermic Metallurgy.

French, H.—*Congress Continues the Mints and Assay Offices;* [Reviews unsuccessful movement to close western and southern mint and assay offices].—Mining & Engg. World, June8,1912; p. 1193; 2500 w; 10c.

Hamilton, E. M.—*Cyaniding of Concentrate;* [Data from Mexican mills treating gold-silver ores].—E. & M. J., Apr.27,1912; p. 839; 5000 w; 25c.

Hedley.—*Smelting in Br. Columbia.*—See Copper.

Jackson, B.—*Experimental Work on Manganese Silver Ore;* [Milling and cyaniding].—M. & S. P., May25,1912; p. 732; 500 w; 20c.

Jacobs, E.—*Metallurgy in British Columbia in* 1911.—See Brit. Columbia.

Jänecke. — *Gold-Silver-Copper.* — See alloys.

Jarman, A.—*Mining and Ore Treatment at the Talisman Mine, Karangahake, N. Z.;* [Read to Australasian Inst. Mng. Engrs.; abstract].—Mng. & Engg. Rev.,Feb.5,1912; p. 193; 8000 w*; 45c. Also in Mines & Minerals, Feb., p. 443; 4800 w*; 35c.

Kern, Edw. F. and A. Heimrod.—*The Determination of Gold and Silver in Copper Bullion.*—Met'g'l & Cheml. Engg., Oct.,1911, p. 496; 3100 w; 35c. Abstract in Mining & Engg. World, Jan.13,1912; p. 74; 2000 w; 10c.

Kern, E. F. and A. A. Heimrod.—*Volatilization of Gold and Silver From Their Copper Alloys.*—Columbia School of Mines Quar'ly, Nov.,1911, pp. 34-65*; 65c.

Liddell, D. M.—*Treating Metal Junk.*—E. & M. J., March2, p. 452; 4000 w*; 25c.

Malcolmson, J. W. and L. R. Budrow.—*Preliminary Handling of Ore at El Tigre.*—M. & S. P., March16,1912, p. 398; 1000 w*; 20c.

Mahringer, A.—*Die Abwässer der Edelmetallwarenfabriken und die Bestimmung des enthaltenen Edelmetalls;* [Waste waters of precious-metal factories, and the determination of precious metals therein].—Elektrochem. Zts., Feb.,1912, p. 301; March, p. 337; 6000 w; $1.

MacFarren, H. W.—*Present Tendency in Gold and Silver Metallurgy.*—Salt Lake Mng. Rev., Apr.30,1912; p. 18; 2500 w*; 25c.

Middleton, G.—*Practice at the Canadian Assay Office at Vancouver.*—Mining & Engg. World, Jan.13,1912; p. 64; 500 w; 10c.

Molinié, M., and H. Dietz.—*L'Argent et les Métaux de la Mine de Platine;* [Silver and the platinum metals; their occurrences, metallurgy, and industrial uses].—Paris, 1912; pp. 399; 93 figs; $2 (book).

Neilly, B.—*Refining Silver Bullion from Cobalt, Ont., Ores;* [U. S. Pat. No. 1,004,-676; Oct. 3, 1911].—Mining & Engg. World, Feb.3,1912; p. 296; 250 w; 10c.

Ossa, I. D.—*Direct Smelting of Silver-Copper Ores;* [Cristobal Colon, Chile; from Soc. Nac. Mineria Chile, Bol.; and Mng. Jnl.].—Mex. Mng. Jnl., Jan.,1912, p. 36; 1000 w; 25c.

Palmer, L. A.—*Mining in the Tintic District, Utah;* [Godiva-Sioux zone; mining and milling practice; silver-lead].—Mines & Minerals, Jan.,1912, p. 375; 4000 w*; 35c.

Poole, W.—*Treatment of Broken Hill Ores.*—See New South Wales.

Rigg, E.—*The Melting of Bullion in Electric Gas-Fired Furnaces;* [Report of Supt. Operatg. Dept. of British Mint; Crown Doc. No. 5862].—London, 1911.

Salas, L. E.—*A Modification of the Gay-Lussac Method for Silver-Bullion Containing Tin.*—Amer. Inst. Mng. Engrs., Bull. 63; March,1912; pp. 267-278; $1.15.

Stewart, J. B.—*Presenting Assay Results by Graphic Methods.*—M. & S. P., May11, 1912; p. 654; 3500 w; 20c.

Traphagen.—*Low-Grade Ore Problem in Colorado.*—See under Zinc.

Trenkner, —. *Die quantitätive Bestimmung der Edelmetalle Gold, Silber, Platin;* [Quantitative estimation of gold, silver, platinum].—Metallurgie, Feb.8,1912; p. 103; 1500 w; 50c.

Wilson, P. D.—*Notes on the Assay of Sulphide Ores* [of gold or silver; also furnace products].—Mex. Mng. Jnl., May,1912; p. 27; 2000 w*; 25c.

Young, Geo. J.—*The Position on the Comstock;* [Reviews recent mining and milling treatment and costs].—E. & M. J., Jan.20,1912, p. 167; 4500 w*; 25c.

———. *Smelter Charges in Utah;* [On Tintic and Park City silver-lead ores].—M. & S. P., Jan.20,1912, p. 145; 500 w; 20c.

———. *The Bradley Process;* [Chlorination extraction of gold, silver and copper from waste copper slimes at Washoe concentrator].—Mng. Jnl., Apr.6.1912; p. 326; 1200 w; 35c.

———. *The New Mill of the Tonopah Belmont Co.;* [Flow sheet].—Mining & Engg. World, June15,1912; p. 1250; 100 w*; 10c.

———. *U. S. Assay Offices; Methods of Operation.*—Mining & Engg. World, Feb. 24,1912, p. 461; 3000 w; 10c. Reprint in Los Angeles Mng. Rev., March9,1912, p. 5; 3000 w; 20c.

GEOLOGY

See also "Ore Genesis," Chapter 13.

Bergeat.—*Geology of Contact Ore Deposits, Concepcion del Oro, Mex.*—See Copper.

Beyschlag, Krusch and Vogt.—*Mono-*

graph of Ore Deposits; [In German].—See under Gold.

Birkeland, Kr.—*Der Ursprung des Silbers zu Kongsberg;* [Genesis of the silver sulfide ores at Kongsberg, Norway; read to Kristiania Videnskaps Selskap, Nov.24, 1911; brief abstract in] Chemiker Ztg., Jan. 18,1912; p. 70; 500 w; 35c.

Blackmore, H. S.—*The Facts About Gold, Silver and Iodine in Sea Water.*—Cassier's Mag., Jan.,1912, p. 3; 3500 w; 35c.

Coghill, W. H.—*Solution of Placer Gold and Silver* [and amounts present in sea water].—M. & S. P., Jan.20,1912, p. 141; 1500 w; 20c.

Hore, R. E.—*Decrease of Values in Ore Shoots with Depth;* [Michigan copper; Cobalt, Ont., silver; Porcupine, Ont., gold].—Canadian Mng. Jnl., Apr.15,1912; p. 260; 4000 w; 25c.

Hershey.—*Genesis of Lead-Silver Ores, Wardner.*—See under Idaho.

Jaeger, F. M.—*Beiträge zur Kenntnis der natürlichen Sulfo-Antimonite, I and II;* [The natural sulfo-antimonites; read to Kkl. Akad. Wetenschappen Amsterdam, Nov.25,1911; brief abstract in] Chemiker Ztg., Feb.6,1912; p. 148; 150 w; 30c.

Matteson, W. G.—*Minerals, Geologic Structure and Genesis of Silver Deposits* [World's principal silver districts].—Mines & Minerals, Jan.,1912, p. 358; Feb., p. 438; March, p. 504; 8500 w*; tables; 95c.

STATISTICAL; MISCELLANEOUS

Massart, E.—*Production et Valeur de l' Argent, du Plomb et du Zinc;* [Production and Values of the World's Silver, Lead and Zinc].—Paris, 1911; pp. —; $1.00 (pamphlet).

Schnatterbeck, C.—*Metal Markets in* 1911.—Mng. Sci., Jan.25, p. 80; 5300 w*; 25c.

———. *The Bullion Markets in* 1911.—Mng. Jnl., Jan.6,1912, p. 7; 1500 w; 35c.

———. *The London Silver Market;* [Pixley & Abell annual review for 1911].—E. & M. J., Jan.27,1912, p. 229; 2000 w; 25c.

———. *The World's Gold and Silver Production in* 1911.—Mining & Engg. World, Jan.27,1912; p. 154; 2000 w; tables; 10c.

Strontium

Höing, Schulze.—*Der Strontianitbergbau im Regierungsbezirk Münster;* [Strontianite mining in Münster, Germany].—Glückauf, March30,1912; 518-519*; 1500 w; 45c.

Tantalum and Niobium

Hauser, O. and A. Lewitz.—*Ueber die Hydrosole der Niobsäure und der Tantalsäure und die Trennung des Niobs und Tantals nach Weiss-Landecker;* [The aqueous solutions of niobic and tantalic acids and the separation of niobium and tantalum after Weiss-Landecker].—Zts. f. angew. Chemie, Jan.19,1912, p. 100; 2000 w; 40c.

Hess, F. L.—See under "Miscellaneous."

Ott. Fr.—*Die elektrolytische Reduktion der Niobsäure;* [Electrolytic reduction of niobic acid and niobates].—Zts. f. Elektrochemie, May15,1912; p. 349; 8000 w*; 40c.

von Pirani, M. and A. R. Meyer.—*Ueber den Schmelzpunkt des Tantals;* [The melting point of tantalum; from Deu. Physikalischen Ges., Verhandl., Vol. 13, No. 14; 1911].—Brunswick, 1911; pp. —; $1.

Schaller, W. T.—*A Study of the Rutile Group.*—U. S. Geol. Survey, Bull. 509; pp. 9-39; 20c.

Schiller, E.—*Ueber Tantal- und Niobpentafluorid sowie über die Reindarstellung der Tantal- und der Niobsäure;* [The pentafluoride of tantalum and of niobium; and the preparation of pure tantalic and niobic acids].—Danzig Techn. Hochschule Dissert; 1911; pp. —; $1 (Thesis).

———. *Strüverite, a Rare Tantalum Mineral from the Fed. Malay States.*—Imperial Inst., Bull., Vol. 9, No. 4; 1911; p. 354; 500 w; 45c.

Tellurium

See Selenium. See also Gold for telluride-gold ores.

Thorium and Rare Earths

See also Cerium; also Tantalum; also Zirconium.

Böhm, C.—*La génesis de las tierras raras;* [Genesis of the rare earths].—Madrid Cientifico, Feb.15,1912; p. 85; 1100 w; 35c.

Böhm, C.—*Die Dissertationen über seltene Erden;* [List of 126 college and university theses in Europe and America, 1856-1911, dealing with the rare earths, their occurrence, chemistry, uses, etc.].—Zts. f. angew. Chemie, Apr.19,1912; p. 758-761; 50c.

Cerdán, A. del C.—*Las "tierras raras" en España;* [The rare earth deposits of Spain; read to Soc. Espan. de Fisica & Quimica].—Rev. Minera, May16,1912; p. 233; 3500 w; 35c.

Gulbrandsen, S.—*Manufacture of Mantles from Artificial Fibres.*—Progressive Age, Feb.,1912, pp. 77-80; 75c.

Hess, F. L.—*Rare Minerals of the South;* [Resources of southern states in monazite, zircon, yttrium, rutile, tin].—Manffrs. Record, Feb.22,1912, p. 72; 5000 w; 65c.

Jakób, W. and S. Tolloczko.—*Chemische Analyse des Thorianits von Ceylon;* [Chemical analyses of thorianite from Ceylon; read to Akad. d. Wiss., Krakau, Nov., 1911; brief abstract].—Chemiker Ztg., Feb.17, 1912, p. 191; 100 w; 30c. Also (in English) in Mining & Engg. World, March16, p. 608; 100 w; 10c.

Moravia, —. *The Occurrence, Winning and Dressing of Monazite in Brazil;* [Translated from Minas Geraes: Escola de Minas de Ouro Preto; Annaes, No. 11, 1909].—Mng. Jnl., Apr.20,1912; p. 398; 1800 w; 35c.

Pratt, J. H. and H. M. Berry.—*The Mining Industry in North Carolina,* 1908-1910. —N. Car. Geol. Survey, Economic Paper No. 23; 1911; 134 pp*; $1.

Rogers, A. F.—*Baddeleyite from Montana;* [Native zirconia from corundum deposits near Bozeman, Mont.].—Amer. Jnl. of Sci., Jan.,1912; p. 54; 1200 w; 65c.

Sterrett, D. B.—*The Production of Monazite and Zircon in* 1911; [U. S. production and imports; bibliography].—U. S. Geol. Surv., Mineral Resources f. 1911; 1912; 6 pp; 20c. Abstract in Mining & Engg. World, May 18,1912; p. 1048; 1200 w; 10c.

Thomas, F.—*Siloxyd, ein höherwertiger Ersatz des Quartzglases;* [Siloxide, an improved substitute for quartz glass; silica containing zirconia or titania].—Chemiker Ztg., Jan.9,1912, p. 25; 3500 w*; 35c.

Watson, T. L., and F. L. Hess.—*Zirconif-*

erous Sandstone near Ashland, Va.—U. S. Geol. Surv., Bull. 530, Part 1; 9 pp; 10c.

Tin

NORTH AMERICA

Alder, A.—*Tin Occurrence in the Black hills, and Methods of Analysis.*—Pahasapa, June,1912; pp. 22-27; 65c.

Brooks.—*Alaska,* 1911.—See Alaska.

Daugherty, R. L.—*South Dakota Gold and Tin Mines;* [Review for 1911].—M. & S. P., Jan.6,1912, p. 77; 750 w; 35c.

Eddy, L. H.—*Dredging for Placer Tin in Alaska; Buck Creek.*—E. & M. J., Dec. 23,1911, p. 1226; 1000 w*; 25c.

Gibson, T. M.—*Tin Dredging in Alaska.*—M. & S. P., Jan.5,1912, p. 14; 500 w*; 35c.

Hess, F. L.—*Rare Minerals of the South;* [Resources of southern states in monazite, zircon, yttrium, rutile, tin.—Manffrs. Record, Feb.22,1912; p. 72; 5000 w; 65c.

Hess, F. L.—See under "Miscellaneous."

Johnson, W. W.—*Tin Dredging in the Seward Peninsula, Alaska.*—Mex. Mng. Jnl., May,1912; p. 18; 750 w*; 25c.

Pratt and Berry.—*N. Carolina,* 1908-1910.—See under N. Carolina.

Rangel, M.—*Mineral Resources of Durango.*—See under Mexico (Durango).

———. *Tin in Alaska.*—Brit. Columbia Mng. & Engg. Record, Jan.,1912; p. 178; 500 w*; 35c.

———. *Tin Prospecting in Mexico.*—Mex. Mng. Jnl., Feb.,1912; p. 18; 750 w; 25c.

SOUTH AMERICA

Adams, O. G.—*Tin Mining in Bolivia;* [Ores, methods and costs].—Australian Mng. Standd., Feb.8,1912; p. 121; Feb.15, p. 145; Feb.22, p. 170; 6000 w*; 65c.

Sanjines, C.—*Mineral Resources of Bolivia;* [Chiefly gold and tin districts and mining regulations].—M. & S. P., March9, 1912, p. 376; 2200 w*; 20c.

———. *Produccion de Estaño en Bolivia;* [Tin production of Bolivia].—Soc. Nac. de Mineria Chile, Bol., Aug.,1911, p.—; $1.00.

———. *S. America in* 1911.—E. & M. J., Jan.6,1912; p. 82; 2000 w; 25c.

EUROPE

Collins, J. H.—*Observations on the West of England Mining Region.*—Roy. Geol. Soc. of Cornwall, Trans.; Vol. XIV; 1912; pp. 684*; (book).

Frühe, H.—*Das Zinnerrecht von Cornwall;* [Historical development of the laws governing the tin industry in Cornwall].—Zts. f. Bergrecht, Vol. 53, No. 2, 1912; p. 165-222*; $1.

Goodchild, W. H.—*The Future of Tin and Incidentally of Cornwall.*—London, 1911; pp. —; pamphlet. Review in Mng. World (London), Feb.3,1912; p. 129; 750 w; 35c.

Hahn, O. H.—*German Mining,* 1911.—E. & M. J., Jan.13,1912; p. 124; 1500 w; 25c.

Hessel, W.—*Der Zinnbergbau in Cornwall;* [The tin mining industry of Cornwall].—Techn. Blätter, Feb.10,1912; p. 42; 2500 w; 45c.

———. *Cornwall and Devon;* [Tin review, 1911].—Mng. Jnl., Jan.6,1912, p. 29; 1000 w; 35c.

———. *Tin and Wolfram in Spain and Portugal.*—Mng. Jnl., May11,1912; p. 453; 2000 w; 35c.

ASIA

Chamberlin, A. M.—*Nigerian Tin Fields;* [Brief description].—M. & S. P., Apr.13, 1912; p. 535; 500 w*; 35c.

Dodson, W. D. B.—*China and Chinese Engineering.*—See China.

de Hautpick, E.—*Siberian Tin and Graphite.*—Mng. Jnl., May25,1912; p. 512; 500 w; 35c.

Hooke, A. W.—*Tin Mining in Northern Nigeria, W. Africa.*—Mng. & Engg. Rev., Jan.,1912; p. 158; 3200 w*; 35c.

Huddart, L. H. L.—*Northern Nigeria, Mining, Trading and Transport Developments.*—Mng. World (London), March30 (Supplement), 1912; xx pp; 35c.

Johnson, H.—*Mining in Northern Nigeria; The Minerals' Proclamation.*—Mng. World (London), Apr.6,1912; p. 422; p. 424; 2000 w; 35c.

Molengraaff, G. A. F.—*The Working of Billiton.*—Mng. Jnl., Feb.3,1912; p. 113; 1000 w; 35c.

Morel, E. D.—*Nigeria Its People and Problems.*—London, 1911; *pp.* —; $3.00 (book). Brief review in Afr. World, Dec. 9,1911, p. iii.

Orr, C. W. J.—*The Making of Northern Nigeria;* [Chiefly on political history and conditions].—London, 1911; pp. ix, 290*; (book).

Read, T. T.—*Mineral Production and Resources of China.*—See under China.

Scrivenor, J. B.—*The Geology and Mining Industries of Ulu Pahang.*—London, 1912; pp. —*; $2.50 (book).

Thomae, W. F. A.—*In the Malay States.*—Mng. Mag., Feb.,1912; p. 132; 2000 w*; 45c.

———. *Alluvial Tin Mining.*—Mng. Mag., Apr.,1912; p. 244; 2400 w*; 35c.

———. *Der Zinnbergbau auf der Halbinsel Malakka;* [Review of tin mining in the Malay peninsula in 1909 and 1910].—Erzbergbau, Dec.1,1911, p. 319; 750 w; 35c.

———. *Equipment at Pusing Bharu Tin Mines, Malay.*—Mng. Mag., April,1912; p. 282; 750 w*; 45c.

———. *The Chinaman as a Miner;* [His methods of tin mining in Siam and Malay; from Malayan Tin & Rubber Jnl.].—Mng. Jnl., Apr.20,1912; p. 401; 800 w; 35c.

———. *The Federated Malay States in* 1911; [Tin production].—Mng. Jnl., Jan.6, 1912, p. 30; p. 23; 500 w; tables; 35c.

———. *The Mining Industry of Yunnan;* [Outlines tin mining and smelting practice].—Roy. Soc. of Arts, Jnl., Jan.12,1912, p. 227; 1000 w; 25c.

AFRICA

Ball.—*Belgian Congo,* 1911.—See Congo.

Marriott.—*Transvaal,* 1911.—See Transvaal.

Swinburne.—*Natal,* 1911.—See Natal.

Trevor, T. G.—*Ancient Mine Workings in the Transvaal.*—See under Transvaal.

Wethered, O.—*The Nigerian Tin Fields;* [Labor conditions; production last 4 months of 1911 by companies].—Afr. World, Jan. 13,1912, p. 583; 500 w; table; 35c.

———. *Costs in Nigeria;* [Alluvial tin workings; costs of concentrates per ton].—

Mng. Mag., Apr.,1912; p. 247; 1000 w; 45c.

———. *Der Zinnbergbau von Nigeria;* The tin mining industry of Nigeria].—Montan Ztg., June1,1912; p. 205; 1100 w; 35c.

———. *Groenfontein Tin Mine;* [Review for 1911].—S. Afr. Mng. Jnl., Apr.6,1912; p. 195; 1000 w; 35c.

———. *Latest Developments in the Tin Industry;* [Transvaal].—S. Afr. Mng. Jnl., March30,1912; p. 137; 2000 w; 35c.

———. *Les mines d'étain de la Nigérie;* [The tin mines of Nigeria].—Rev. Parisienne, March10,1912; 1200 w; 75c.

———. *Nigeria;* [Recent developments and shipments].—Mng. Jnl., June1, pp. 535, 547; June15, p. 557; 4000 w; 50c.

———. *Nigerian Tin Mining;* [Output of companies monthly, Aug.,1911-Jan., 1912].—Mng. World (London), Feb.17, 1912; p. 190; 1600 w; 35c.

———. *Nigerian Tin Mining;* [Review of recent developments].—African World, Dec.16,1911, p. 337; Dec.23, p. 340; Dec. 30, p. 390; Jan.6, p. 241; 6000 w*; 65c.

———. *Nigerian Tin Industry;* [Review of Production, 1911].—Mng. World (London), Dec.23,1911, p. 340; 1200 w; 35c.

———. *Northern Nigeria;* [Transportation and Baro-Kano Ry.].—Mng. Jnl., Jan. 6,1912, p. 30; 300 w; 35c.

———. *Nigerian Tin Developments.*—Afr. World, March2,1912; p. 197; March9, pp. 243-249; March16, pp. 309-315*; March 23, p. —; 10,000 w; 75c.

———. *Northern Nigeria;* [Review of developments, 1st quarter, 1912].—Mng. Jnl., May4,1912; p. 424; 1500 w; 35c.

———. *The Mineral Output of the Transvaal in* 1911.—Mining & Engg. World, April6,1912; p. 768; 1500 w; 10c.

———. *The Problem of the Potgietersrust Tin Fields;* [Geology of ore bodies].—S. Afr. Mng. Jnl., Feb.10,1912; p. 831; 2400 w*; 35c.

———. *The Tin Fields;* [Recent Transvaal developments].—S. Afr. Mng. Jnl., Apr.27,1912; p. 314; 2000 w; 35c. Also in Mng. World (London), May25, p. 661; 2000 w; 35c.

———. *The Transvaal Consol. Land & Explor. Co., Ltd., and the Transvaal Tin Industry.*—S. Afr. Mng. Jnl., Apr.13,1912; p. 239; 1400 w; 35c.

———. *Tin in the Pretoria District.*—S. Afr. Mng. Jnl., Dec.9,1911, p. 482; 1400 w; 35c.

———. *Tin Deposits in Northern Nigeria.*—Mng. Mag., March,1912; p. 175; 1800 w; 35c.

———. *Tin Mining in South Africa;* [Brief summary of various fields].—S. Afr. Engg., Jan.,1912; p. 6; 1200 w; 25c.

AUSTRALASIA

Ball, L. C.—*Occurrence of Tinstone in the Burnett District.*—Queensl. Govt. Mng. Jnl., March,1912; p. 107; 4000 w*; 35c.

Clark, D.—*Australian Mining & Metallurgy.*—Melbourne, 1911; 600 pp.*; $6.50 (book).

Dunn, E. J.—*Tin Ore at Beechworth, Vict.*—Australian Mng. Standd., Jan.18, 1912; p. 50; 1800 w; 35c.

MacDonald, A. R.—*The Queensland Mining Industry; Review of the Year* 1911.—Qu. Govt. Mng. Jnl., March,1912; pp. 89-101*; 45c. Abstract in Australian Mng. Standd., Apr.4, p. 309; Apr.11, p. 330; 3500 w; 50c.

Mance.—*Australasia,* 1911.—See Australia.

Pittmann, E. F.—*The Mineral Industry of New South Wales During* 1911; [Preliminary official report; sliver-lead-zinc, copper, gold, tin, coal, tungsten; tin and gold dredging].—Australian Mng. Standd., Jan. 11,1912; p. 26; Apr.25, p. 380; 2000 w; 50c. Also in Mng. & Engg. Rev., March, p. 246; 2400 w; 35c. Also reviewed in London Mng. Jnl., May25, p. 505; 2500 w; 35c.

Ward, L. K.—*Mt. Balfour Mining Field;* [Tasmania; tin-tungsten and copper].—Australian Mng. Standd., Apr.25,1912; p. 382; 2000 w; 35c.

———. *Emmaville Tin Field, N. S. W.;* [Recent Dredging Progress].—Australian Mng. Standd., Nov.30,1911, p. 548; 1000 w; 35c.

———. *Northern Territory in* 1911.—See under Australia.

METALLURGY; CHEMISTRY

See also Alloys.

Cohen, Ernst.—*The Allotropy of Metals;* [Tin and Explosive Antimony].—Faraday Soc., Trans., Nov.,1911, pp. 122-135*; $4.00.

Härdén, J.—*Electric Smelting and Reduction of Ore in England;* [Tin, wolfram and ferro-alloys, by Electric Furnaces & Smelters, Ltd.].—Electrician, Dec.29,1911, Abstract in Mining & Engg. World, March16,1912. p. 604; 1500 w; 10c. Also in U. S. Consul. Rep., March23, p. 1192; 1000 w; 20c.

Härdén, J.—*Electric Tin Smelting; A Commercial Scale Trial.*—Met. & Cheml. Engg., Sept.,1911, p. 453; 4800 w*; 35c. Reprinted in Electrician (London), Sept. 29, p. 964; 35c. Also in Iron & Coal Trades Rev., Oct.6, p. 583; 30c. Also in Australian Mng. Standd., Dec.7, p. 577; Dec.14, p. 603; 50c.

In German in E. T. Z., Vol. 43, 1912; p. 237; 2500 w; 45c. Also in Zts. f. Elektrochemie, June1, p. 443; 2500 w; 45c.

Heike, W.—*Zinnhaltiger Bleiglanz aus einem Eisenhochofen und das System Schwefelblei und Schwefelzinn;* [Notes on some tin-bearing lead sulphides occurring in a Silesian iron slag, and remarks on the combination of tin and lead sulphides].—Metallurgie, May22,1912; p. 313-319*; 50c.

Morgan, R. G.—*Estimation of Tin in an Ore;* [read to Australasian Inst. of Mng. Engrs.; abstract].—Cheml. Engr., July, 1911; p. 289; 1500 w; 35c. Also in Mng. Sci., Aug. 17, p. 150; 1500 w; 20c. Also in Mining & Engg. World, Oct.,14, p. 757; 1500 w; 10c. Also in Cheml. Met & Mng. Soc. of S. Afr., Jnl., Nov.,1911, p. 135; 1200 w; 90c.

Parravano, N., and P. de Cesaris.—*Die Arsenide des Zinns;* [The arsenides of tin].—Internat. Zts. f. Metallogr., Oct.,1911, p. 1-12; 95c.

Schleicher. — *Tin-Cadmium Alloys.* — See Alloys.

Steinhart, O. J.—*The Sale of Tin Ores;* [Charges at various centers].—Mng. Mag., March,1912; p. 202; 1000 w; 35c.

———. *An Electric Furnace for Non-Ferrous Metals;* [Tin dross, etc.; Pittsburgh arc-resistance combination type].—Iron Trade Rev., Feb.1,1912, p. 279; 1200 w*; 20c.

———. *Concentrating Bolivian Tin Ores;* [Flow sheet of Llallagua mine].—Mng. Mag., March,1912; p. 208; 1000 w*; 35c.

———. *East Pool and Agar;* [Flow Sheet of mill].—Mng. Mag., Feb.,1912; p. 115; 100 w*; 45c.

———. *Recent Experiments in the Electrometallurgy of Tin in France.*—Mining & Engg. World, Apr.20,1912; p. 869; 500 w; 10c.

———. *Selling Tin Concentrates;* [Critical review of Cornish methods].—Mng. Mag., Jan.,1912, p. 251; 1000 w; 35c.

———. *Zinnschrot;* [Use of tin in manufacture of shot].—S. W. Deu. Industrie Ztg., Jan.23,1912; p. 35; 750 w; 35c.

DE-TINNING

Goldschmidt, K. and Jos. Webber.—*The Goldschmidt Process of Detinning Scrap.*—Mining & Engg. World, Dec.23,1911, p. 1267; 1800 w*; 10c.

Jocolliet, P.—*Procédés électrolytiques pour le désétamage et la récupération des déchets de fer-blanc, système P. Jocolliot;* [Jocolliot electrolytic detinning process].—Jnl. d Mines & Mét'l'gie, Feb.,1912; p. —; 50c. Abstract in Rev. d'Electrochimie, April, 1912; p. 111; 1000 w; 65c.

Liddell, D. M.—*Treating Metal Junk.*—E. & M. J., March2, p. 452; 4000 w*; 25c.

Walton, S. F.—*The Manufacture of Fuming Bi-Chloride of Tin;* [Chlorination process of detinning scrap].—Iowa Engr., Dec.,1911, p. 86; 1000 w; 35c.

———. *L'industria del recupero dello stagno dai ritagli di latta in Italia;* [The industry of tin recovery from scrap in Italy].—Rassegna Mineraria, Jan.11,1912; p. 27; 2000 w; 35c.

English abstract in Met. & Cheml. Engg., April1912; p. 202; 1400 w; 35c. Also in Iron & Coal Trades Rev., Apr.12, p. 564; 1400 w; 35c.

———. *Ueber das Schmelzen von Zinnkrätze in kleinen Mengen;* [Smelting of industrial metal wastes containing tin, to recover metal tin or tin oxide].—Giesserei Ztg., Jan.1,1912, p. 30; 500 w; 35c.

GEOLOGY

Ferguson, H. G., and A. M. Bateman.—*Geologic Features of Tin Deposits;* [Geology of world's deposits].—Econ. Geol'y, April-May,1912; p. 209-262*; 65c.

Abstract in S. Afr. Mng. Jnl., June22, p. 610; 1600 w; 35c.

Singewald, J. T.—*Some Genetic Relations of Tin Deposits;* [Various types of deposits and genesis].—Econ. Geol'y, April-May, 1912; p. 263-279; 65c.

TIN-PLATE; MISCELLANEOUS

Gürtler.—*Tin-Cadmium Alloys.*—See Alloys.

Lomax, A.—*Transparent Tin-Oxide Glazes.*—English Ceramic Soc., Trans; Vol. II, Part 1; 1912; p. 118-143*; $6.

Luty, B. E. V.—The Sheet and Tin-Plate Trades in 1911; [Iron Age, Jan.4,1912, p. 63; 1600 w; 65c.

———. *Der Hamburger Schlussschein für Geschäfte in Zinn;* [New contract specifications for tin on the Hamburg Metal Exchange, effective Jan. 1, 1912].—Erzbergbau, Feb.1,1912; p. 35; 2000 w; 35c.

———. *London Tin Market in* 1911.—E. & M. J., Jan.13,1912, p. 135; 1500 w; 25c.

———. *New York Tin Contract;* [New standard].—Mng. Jnl., March16,1912; p. 263; 1000 w; 35c.

German abstract in Erzbergbau, May1, p. 158; 1200 w; 35c.

———. *Review of the World's Tin Production in* 1911.—Mining & Engg. World, Jan.27,1912; p. 178; 3600 w; 10c.

German abstract in Erzbergbau, Apr.15, 1912; p. 140; 1600 w; 35c.

———. *The German Tinplate Industry;* [Translated from Stahl & Eisen, March21].—Mng. Jnl., Apr.20,1912; p. 399; 1500 w; 35c.

———. *The Metal Markets in* 1911; *Copper, Tin.*—Mng. Jnl., Jan.20,1912; p. 59; 5000 w; 35c.

———. *The Tin Industry in* 1911.—E. & M. J., Jan.6,1912, p. 19; 1500 w; 25c.

———. *The Tin Plate Industry of Germany;* [Semi-centennial of Weissblech Verkaufs Comptoir].—Iron & Coal Trades Rev., Apr.26,1912; p. 649; 1800 w*; 35c.

———. *Tin-Plate Trade and Industry;* [Review of American and British tin-plate 1909-1911].—U. S. Consul. Rep., Feb.14, 1912; p. 682; 1000 w; 20c.

———. *Tin Records;* [Review for 1st quarter of 1911].—Mng. Jnl., May4,1912; p. 424; 1500 w; 35c.

———. *U. K. and U. S. Imports of Tin in* 1911.—Mng. Jnl., Jan.13,1912, p. 53; tables; 35c.

———. *Welsh and American Tinplate Costs and Prices.*—Iron & Coal Trades Rev., March8,1912, p. 383; 1500 w; 30c.

———. *N. Y. Metal Prices for* 14 *Years.*—Iron Age, Jan.18,1912; p. 192; charts; 30c.

Titanium

See also Ferro-Alloys and "Special Irons and Steels," in Chapter 4.

Bachran, Fr.—*Beiträge zur Kenntnis des Titans.*—Berlin Techn. Hochschule dissert., 1911; 40 pp.; (thesis).

Bordewich, H.—*Rutile Production in Norway.*—U. S. Consul, Rep., Dec.21,1911, p. 1463; 300 w; 35c. Reprinted in Mining & Engg. World, Jan.6,1912, p. 12; 300 w; 10c.

Henton, H. M.—*Titanium's Place in Metallurgy and Chemistry;* [Occurrences and uses].—Pahasapa, Feb.1912; p. 10; 2500 w; 25c. Abstract in M. & S. P., March30, 1912; p. 472; 1200 w; 20c.

Hess, F. L.—See under "Miscellaneous."

Hess, F. L.—*Rare Minerals of the South;* [Resources of southern states in monazite, zircon, yttrium, rutile, tin].—Manffrs. Record, Feb.22,1912; p. 72; 5000 w; 65c.

Mixter, W. G.—*The Heat of Formation of Titanium Oxide.*—Amer. Jnl. of Sci., Jan., 1912; p. 45; 1500 w; 65c.

Schaller, W. T.—*A Study of the Rutile Group.*—U. S. Geol. Survey, Bull. 509; pp. 9-39; 20c.

Thomas, F.—*Siloxyd, ein höherwertiger Ersatz des Quartzglases;* [Siloxide, an improved substitute for quartz glass; silica containing zirconia or titania].—Chemiker Ztg., Jan.9,1912, p. 25; 3500 w*; 35c.

Warren, C. H.—*Ilmenite Rocks near St. Urbain, Quebec.*—Amer. Jnl., of Sci., March, 1912; pp. 263-277*; 65c.

———. *Distribution and Some Uses of Titanium Ores;* [From Imperial Inst.,

Bull.].—Mining & Engg. World, Jan.20, 1912; p. 123; 3000 w; 10c.

———. *The World's Titanium Industry.* —Mining & Engg. World, Jan.27,1912; p. 192; 1200 w; 10c.

Tungsten

See also Ferro-Alloys and "Special Irons and Steels," in Chapter 4.

Ackermann, Eug.—*Le marché du wolfram;* [The wolfram market; conditions of competition between Colorado and the rest of the world; from Jnl. d. Mines & Métallurgie].—Echo d. Mines, May13,1912; p. 588; 1800 w; 35c.

Clark, D.—*Australian Mining & Metallurgy.*—Melbourne, 1911; 600 pp.*; $6.50 (book).

Collins.—*Colorado,* 1911.—See Colorado.

Collins, J. H.—*Observations on the West of England Mining Region.*—Roy. Geol. Soc. of Cornwall, Trans.; Vol. XIV; 1912; pp. 684*; (book).

Coolidge, W. D.—*Some Applications of Wrought Tungsten and Molybdenum.*—Jnl. of Ind'l & Engg. Chem'y, Jan.,1912, p. 3; 2500 w; 65c.

Davis, R. S.—*Method of Analysis for Wulfenite Ores and Ferro-Boron.*—Mining & Engg. World, June1,1912; p. 1137; 1200 w; 10c.

Frenzel, A. B.—*Growth of the Rare Metal Industry;* [Colorado].—Mng. Sci., Jan., 1912, p. 73; 1000 w; 25c.

Hall, F.—*Colorado,* 1911.—See Colorado.

Henahen. — *Colorado,* 1911.—See Colorado.

Hess, F. L.—*The Production of Tungsten in* 1910; [Production and resources in U. S. and abroad].—U. S. Geol. Survey, Mineral Resources f. 1910; 1911; 21 pp.; 10c.

Hess, F. L.—*The Tungsten Industry;* [Preliminary review of U. S. Geol. Survey for 1911].—E. & M. J., Jan.6,1912, p. 39; 500 w; 25c.

Kantschew, K.—*Eine kritische Untersuchung auf dem Gebiete der Wolfram- und Wolframchromverbindungen;* [New titration method, and critical notes on analysis of tungsten and tungsten-chrome compounds; brief abstract of paper read to 2d Mendeléyevf Congress, St. Petersburg, Dec., 1911].—Chemiker Ztg., Feb.20,1912; p. 198; 250 w; 25c.

MacDonald, A. R.—*Queensland,* 1911.—See under Australia (Queensland).

Meyers, R. E.—*Commercial Manipulation of Refractory Elements for Incandescent Lamp Purposes;* [Preparation of tungsten and molybdenum].—Amer. Inst. Chem. Engrs., Trans., Vol. III, pp. 172-187.

Mönkemeier, R.—*Die Entwickelung der Metallfadenglühlampe, insbesondere der Wolframlampe, und ihre wirtschaftliche Bedeutung;* [Development of the metal-filament lamp, especially the tungsten lamp].—Oberschles. Berg- & Hüttenm. Ver., Zts.; April,1912; p. 151; 4500 w*; 45c.

Pearce, W. C. W.—*The "Glen" Bismuth Mines, North Queensland;* [Bismuth-tungsten mining and treatment, Heberton district].—Instn. of Mng. & Met'l'gy, Bull. 87, Dec.,1911, pp. 1-5*; 1600 w; 50c. Abstract in Mining & Engg. World, Nov.4,1911, p. 918; Jan.13,1912, p. 71; 2500 w*; 20c.

Pickings, H. B.—*Metalliferous Mines.*—N. Scotia Dept. of Mines, Rep. f. 1911; 1912; pp. 187-231*; $1.

Pittmann.—*New South Wales,* 1911.—See Tin.

Quinney, E. H.—*Tungsten in the Black Hills, and Methods for its Determination;* [From S. Dak. School of Mines Quarterly]. —Mng. Sci., Jan.18,1912, p. 45; 1300 w; 20c. Also in Mining & Engg. World, July 13, p. 54; 1500 w; 10c.

Rangel, M.—*Mineral Resources of Durango.*—See under Mexico (Durango).

Ruder, W. E.—*Solubilità del tungsteno e del molibdeno fucinati;* [Behavior of ductile tungsten and molybdenum to various acids and alkalis; from Amer. Chem. Soc., Jnl; Vol. 34, No. 4; pp. 387-389].—Rassegna Mineraria, Apr.21,1912; p. 231; 1200 w; 35c.

Skinner, R. P.—*Tungsten and Its Uses.* —U. S. Consul. Rep., Feb.23,1912; p. 793; 1000 w; 20c. Also in M. & S. P., March16, p. 378; 1000 w; 20c. Also in Chem. Met. & Mng. Soc. of S. Afr. Jnl., May, p. 484; 600 w; 90c.

Walker, T. L.—*Wolframite in New Brunswick;* [From "Economic Geology"].—Mining & Engg. World, Jan.13,1912; p. 73; 600 w; 10c.

Ward, L. K.—*Mt. Balfour Mining Field;* [Tasmania; tin-tungsten and copper].—Australian Mng. Standd., Apr.25,1912; p. 382; 2000 w; 35c.

Wood, J. R.—*The Black Metal in Boulder County, Colo.*—Mng. Sci., Apr.11,1912; p. 335; 750 w; 20c.

———. *Iberian Tungsten Ores.*—E. & M. J., Dec.23,1911, p. 1227; 400 w; 25c.

———. *Northern Territory in* 1911.—See under Australia.

———. *Review of the Tungsten Mining Industry in* 1911; [In U. S., Asia, Europe, S. America, Australia].—Mining & Engg. World, Jan.27,1912; p. 181; 3500 w; 10c.

———. *Scheelite in New Zealand;* [Macraes district, central Otago].—Australian Mng. Standd., Apr.4,1912; p. 309; 500 w; 35c.

———. *Tin and Wolfram in Spain and Portugal.*—Mng. Jnl., May11,1912; p. 453; 2000 w; 35c.

———. *Traz-os-Montes Wolfram Mine;* [New large North Portugal mine].—E. & M. J., May25,1912; p. 1038; 250 w; 25c.

———. *Wolfram Mining in Australia;* [Fielder's Hill district, northern N. S. W.]. —Mng. Mag., Jan.,1912, p. 44; 400 w; 45c.

Uranium

See also Radium.

Bixby, Maynard.—*Marketing Uranium-Vanadium;* [Buyers and shipping conditions for Utah ores, with notes on Temple Rock deposits].—Salt Lake Mng. Rev., May 15,1912; p. 13, p. 20; 1000 w; 25c.

Collins.—*Colorado,* 1911.—See Colorado.

Fischer, Siegfr.—*The Concentration of Carnotite Ores, and Some Similar Ores.*—Met. & Cheml. Engg., June,1912; p. 356; 2700 w*; 35c.

Frenzel.—*Rare Metal Industry, Colorado.* —See under Colorado.

Hall, F.—*Colorado,* 1911.—See Colorado.

Henahen. — *Colorado,* 1911.—See Colorado.

Hess, F. L.—See under "Miscellaneous."

Iwanow, W. N.—*Explosionsfähigkeit von salpetersäurem Uran;* [Explosibility of uranium nitrate].—Chemiker Ztg., March16, 1912; p. 297; 500 w; 35c.

Jakób, W. and S. Tolloczko.—*Chemische Analyse des Thorianits von Ceylon;* [Chem-

ical analyses of thorianite from Ceylon; read to Akad. d. Wiss., Krakau, Nov., 1911; brief abstract].—Chemiker Ztg., Feb.17, 1912, p. 191; 100 w; 30c. Also (in English) in Mining & Engg. World, March16, p. 608; 100 w; 10c.

Kravani, V.—*The Uranium Ore Question.*—Mng. Jnl., May4,1912; p. 446; 1000 w; 35c.

Lacroix, A.—*Les recherches minières de Madagascar;* [Mineral resources of Madagascar].—Echo d. Mines, Apr.15,1912; p. 456; 1200 w; 35c. Reprint in Soc. Amicale d. Mineurs de Douai; Bull.; Apr.25, p. 237; 1200 w; 35c.

Step, J. and F. Dautwitz.—*St. Joachimsthal;* [St. Joachims Valley, Bohemia, and its uranium and radium industry].—Vienna,1911; 107 pp*; $1 (book).

Wherry, E. T.—*New Occurrence of Carnotite;* [As coating on conglomerate pebbles, Mt. Pisgah, Mauch Chunk, Pennsylvania].—Amer. Jnl. of Sci., June,1912; pp. 574-580; 65c.

Willmarth, O. B.—*Radioactivity of Colorado Carnotite;* [With radiographs].—Mng. Sci., April4,1912; p. 313; 500 w*; 20c.

———. *Green River Carnotite;* [Utah].—Salt Lake Mng. Rev., May30,1912; p. 14; 1200 w*; 25c.

———. *Paradox Valley Carnotite Deposits;* [Colorado].—Salt Lake Mng. Rev., Jan. 15,1912, p. 14; 2000 w*; 25c.

Vanadium

See also "Ferro-Alloys," and "Chemistry," in Chapter 4.

Bixby, Maynard. —*Marketing Uranium-Vanadium;* [Buyers and shipping conditions for Utah ores, with notes on Temple Rock deposits].—Salt Lake Mng. Rev., May 15,1912; p. 13, p. 20; 1000 w; 25c.

Cain, J. R. and D. J. Demarest.—*A New Method for the Determination of Vanadium* [In steels].—Jnl. of Ind'l & Engg. Chem'y, April,1912; p. 249; p. 256; 2100 w; 65c.

Cain, J. R. and J. C. Hostetter.—*A Rapid Method for the Determination of Vanadium in Steels, Ores, etc., based on its Quantitative Inclusion by the Phospho-Molybdate Precipitate.*—Jnl. of Ind'l & Engg. Chem'y. April,1912; p. 250; 6000 w*; 65c.

Carl, P. H.—*Vanadium as a Staple Colorado Product;* [Reviews production in 1911].—Mng. Sci., May9,1912; p. 409; 1500 w; 20c.

Carl, P. H.—*The Status of Mining in Colorado Districts;* [Reviews drainage problems, cyaniding and vanadium].—Mng. Sci., Jan.25,1912, p. 99; 1800 w*; 25c.

Clifford, Jas. O.—*Vanadium;* [Its minerals, extraction, and uses].—Mines & Methods, May,1912; p. 491; 2000 w; 20c.

Collins.—*Colorado,* 1911.—See Colorado.

Curran, T. F. V.—*Vanadium; Its Ores and Uses.*—E. & M. J., June1,1912; p. 1093; 3500 w*; 25c.

Curran, T. F. V.—*Vanadium Ores and Uses.*—Mex. Mng. Jnl., April,1912; p. 17; 1000 w; 25c. Also in Salt Lake Mng. Rev., May15, p. 27; 1000 w; 25c. Also in E. & M. J., June1, p. 1093; 3500 w*; 25c.

Delbarre, F.—*Etude sur les méthodes de récherche et de dosage du vanadium;* [Study of the various methods of detecting and estimating vanadium].—Bull. Technig. du Nord, Feb.-March,1912; p. 25-35; 4000 w; 75c.

Fischer, Siegfr.—*The Concentration of Carnotite Ores, and Some Similar Ores.*—Met. & Chem. Engg., June,1912; p. 356; 2700 w*; 35c.

Frenzel, A. B.—*Growth of the Rare Metal Industry;* [Colorado].—Mng. Sci., Jan.25, 1912, p. 73; 1800 w; 25c.

Garratt, F.—*The Rapid Determination of Vanadium in Steel.*—Jnl. of Ind'l & Engg. Chem'y, April,1912; p. 257; 700 w; 65c.

Hall, F.—*Colorado,* 1911.—See Colorado.

Henahen. — *Colorado,* 1911.—See Colorado.

Hess, F. L.—*The Production of Vanadium in* 1910.—U. S. Geol. Survey Mineral Resources f.' 1910; 1911; 2000 w; 10c.

Lickfett, H.—*Chloride, Bromide und Fluoride des Vanadins;* [The chlorides, bromides and fluorides of vanadium].—Danzig Techn. Hochschule dissert., 1911; pp. —; $1 (Thesis).

Longobardi, E., and N. Gamus.—*Existencia de vanadio en algunos petroleos argentinos;* [Presence of vanadium in some petroleums of Argentina].—Soc. Cient. Argentina, Anales; Dec.,1911; pp. 283-286; $1.15.

Renschler, Eug. — *Zur elektrolytischen Darstellung dreiwertiger Vanadiumsalze;* [The electrolytic preparation of tri-valent vanadium salts].—Zts. f. Elektrochemie, Feb.15,1912; p. 137; 500 w; 45c.

Ruff and Martin.—*Ueber reines Vanadin;* [Pure vanadium, its preparation and properties].—Zts. f. angew. Chemie, Jan. 12,1912; p. 49-56*; 75c.

English abstract in Mng. Jnl., March9, 1912, p. 242; 1800 w; 35c.

Thomas, K.—*Vanadium in Southwestern Colorado.*—M. & S. P., Jan.27,1912; p. 168; 750 w; 20c.

Wherry, E. T.—*New Occurrence of Carnotite;* [As coating on conglomerate pebbles, Mt. Pisgah, Mauch Chunk, Pennsylvania].—Amer. Jnl. of Sci., June,1912; pp. 574-580; 65c.

Wood, J. R.—*New Vanadium Fields;* [Colorado].—Mng. Sci., Jan.25,1912, p. 74; 700 w*; 25c.

———. *Datos para la busca del vanadium en Bolivia;* [Notes on the vanadium prospects of Bolivia].—Soc. Nac. Mineria Chile, Bol., Aug.,1911, p.—; $1.00.

———. *Green River Carnotite;* [Utah].—Salt Lake Mng. Rev., May30,1912; p. 14; 1200 w*; 25c.

———. *L'industrie du vanadium en France;* [Manufacture of vanadic acid by the Santa Marta Co., Perret process, at Cire les Mello, Oise; brief note on the plant].—Echo d. Mines, Jan.15,1912; p. 61; 500 w; 35c.

———. *Paradox Valley Carnotite Deposits;* [Colorado].—Salt Lake Mng. Rev., Jan.15,1912, p. 14; 2000 w*; 25c.

———. *Physiological Effect of Vanadium.*—Mining & Engg. World, Jan.6,1912, p. 3; 500 w; 10c.

———. *S. America in* 1911.—E. & M. J., Jan.6,1912; p. 82; 2000 w; 25c.

———. *The New Plant of the Vanadium Metals Co. at Groton, Conn.*—Brass World, Nov.,1911, p. 383; 1000 w*; 20c.

———. *Vanadium in* 1911; [Review of production in U. S. and Peru].—E. & M. J., Jan.6,1911, p. 40; 600 w; 25c.

———. *Vanadium Deposit Found in Southeastern Utah;* [Near Cisco, 60 miles

west of Grand Junction, Colo.].—Mng. Investor, June3,1912; p. 42; 500 w; 25c.

———. *Vanadium Industry in U. S. and Peru.*—Mining & Engg. World, Jan.27,1912; p. 183; 800 w; 10c.

Zinc

U. S. AND CANADA

Adamson.—*Nevada,* 1911.—See Nevada.

Babbitt, E. C.—*The Marion Zinc Mine of Custer County, Colo.*—Mng. Sci., Dec.21, 1911, p. 548; 1500 w*; 20c.

Bain, H. F.—*Ore Not in Sight;* [Describes zinc ore-shoots in Dubuque, Iowa, region].—M. & S. P., March2,1912; p. 337; 500 w*; 15c.

Bell.—*13th Annual Idaho Report.*—See under Idaho.

Bigham, Geo. W.—*Oklahoma Lead and Zinc Mining in* 1911.—E. & M. J., Jan.6, 1912, p. 23; 500 w; 25c.

Butler and Dunlop.—*Metal Production in the Central States,* 1911.—See under Lead.

Chapman, T.—*The Miami Zinc-Lead District, Oklahoma.*—E. & M. J., June8,1912; p. 1146; 1500 w*; 25c.

Collins.—*Colorado,* 1911.—See Colorado.

Copenharve.—*Montana,* 1911.—See Montana.

Dwyer, Wm. J.—*Zinc Dust in* 1911; [Review of production and shipments].—E. & M. J., Jan.13,1912, p. 122; 500 w; 25c.

Fisher, F. L.—*Montana,* 1911.—See Montana.

Goodale.—*Newfoundland.*—See Newfoundland.

Hall, F.—*Colorado,* 1911.—See Colorado.

Hedley, R. R.—*British Columbia in* 1911. —See under Br. Columbia.

Heikes, etc.—*Metal Production in Western and Alaskan Mines,* 1910.—See under U. S.

Henahen. — *Colorado,* 1911.—See Colorado.

Hinds, T.—*Output of Lead and Spelter Shows Increase;* [Review in U. S. for 1911]. —Mng. Sci., Jan.25,1912, p. 70; 2500 w*; 25c.

Ingalls, W. R.—*Spelter Statistics for* 1911; [Ore and metal production in U. S.]. —E. & M. J., May25,1912; p. 1039; 750 w; tables; 25c.

Jacobs, E.—*Review of Mining and Production in British Columbia in* 1911.—Canadian Mng. Jnl., Jan.1,1912; p. 7; 4500 w; 25c. Also in M. & S. P., Jan.6, p.68; 3000 w; 35c. Also in E. & M. J., Jan.6, p. 75; 2000 w; 35c. Also in Mining & Engg. World, Jan.27, p. 261; 7000 w; 25c.

Kelley, P. K.—*The Wisconsin Zinc District.*—M. & S. P., Feb.17,1912; p. 276; 1800 w*; 20c.

Kennedy, J. E.—*Zinc Mining in Wisconsin;* [Review for 1911].—E. & M. J., Jan. 6, 1912, p. 25; 600 w; 25c.

Lakes, Arthur, Sr.—*Operations at the Wellington Mine, Breckenridge, Colo.*— Mining & Engg. World, Dec.23,1911, p. 1265; 2500 w*; 10c.

Lewis, J. H.—*Review of Mining in the U. S. in* 1911; *Wisconsin* [Lead-zinc].— Mining & Engg. World, Jan.27,1912; p. 243; 6000 w; 25c.

Moore, H. F.—*An Investigation of the Strength of Rolled Zinc.*—Univ. of Illinois, Bull. No. 52, 1911; 24 pp*; 25c.
Abstract in Chemi. Engr., Feb.,1912, p. 45; 3600 w; 35c. Also in Engg. News, May 9, p. 862; 2500 w*; 25c.

Perkins, E.—*Arizona,* 1911.—See Arizona.

Plumb, C. H.—*The Miami, Oklahoma, Mining Camp.*—Mines & Minerals, May, 1912; p. 627; 1000 w*; 35c.

Robertson, W. F.—*British Columbia,* 1911.—See under Br. Columbia.

Ruhl, O.—*Review of Mining in the U. S. in* 1911; *Missouri-Kansas Zinc-Lead.*—Mining & Engg. World, Jan.27,1912; p. 220; 2700 w; 25c.

Schnatterbeck, C. — *Metal Markets in* 1911.—Mng. Sci., Jan.25, p. 80; 5300 w*; 25c.

Scott, W.—*Idaho,* 1911.—See Idaho.

Siebenthal, C. E.—*The Copper, Lead and Zinc Industries of the Southern States.*— Manffrs. Record, Feb.22,1912; p. 61; 4500 w; 65c.

Siebenthal, C. E.—*Production and Consumption of Spelter in* 1911; [By states in U. S.; preliminary official figures].—Mining & Engg. World, Feb.24,1912; p. 463; 1000 w; tables; 10c Also in M. & S. P., March 2, p. 335; table; 15c.

Snider, L. C.—*Review of Mining in the U. S. in* 1911; *Oklahoma.*—Mining & Engg. World, Jan.27,1912; p. 231; 3600 w; 25c.

Snider, L. C.—*Oklahoma Lead and Zinc Fields .*—E. & M. J., Dec.23,1911, p. 1228; 3600 w*; 25c.

Stoneham, W. J.—*Nevada,* 1911.—See Nevada.

Vallance, J.—*Standard Mine.*—See Br. Columbia.

Walsh, Wm.—*Montana Ranks High as a Metal Producer;* [Annual report for 1911]. —Mining & Engg. World, Dec.16,1911, p. 1217; 2200 w; 10c.

Walter, P.—*New Mexico,* 1911.—See N. Mex.

White, D.—*Zinc Mines of Southern Nevada;* [Read to Goldfield meeting Amer. Mng. Congr.].—Mines & Minerals, June, 1912; p. 671; 4500 w; 35c.

Wittich, L. L.—*Following the Ore in Joplin Mines;* [Drifting and development methods in "sheet ground," disseminated ore and "soft ground"].—Mines & Minerals, April, 1912; p. 556; 2500 w*; 35c.

Wittich, L. L.—*The Joplin District in* 1911.—Mines & Minerals, Feb.,1912; p. 447; p. 433; 1500 w; 35c.

Zalinski, E.—*Utah,* 1911.—See Utah.

Zehring, W.—*Utah,* 1911.—See Utah.

Zook, J. A.—*The Joplin District in* 1911; [Statistical review].—E. & M. J., Jan.6,1912, p. 24; 1500 w; tables; 25c.

———. *Joplin Lead and Zinc Production,* 1911.—M. & S. P., Jan.13,1912, p. 109; 500 w; tables; 20c.

———. *Mining in the Coeur d'Alenes;* [Reviews zinc and lead production, 1911].— E. & M. J., Jan.6,1912, p. 16; 500 w; 25c.

———. *Mining in Nevada in* 1911.—E. & M. J., Jan.6,1912; p. 67; 3000 w; 25c.

———. *Refined Lead and Spelter in the U. S. in* 1911; [Also reviews mining production].—Mining & Engg. World, Jan.27, 1912; p. 161; 4000 w; table; 10c.

———. *Ymir Camp.*—See Br. Columbia.

LATIN AMERICA

Brady, A. C.—*Mexico,* 1911.—See Mexico.

Brady, A. C.—*Review of Mining in Foreign Countries in* 1911; *Mexico* [Sonora, by 27,1912; p. 249-261; 19,000 w; 25c.

Gonzales, etc.—*Mining Industry of Hidalgo.*—See under Mexico (Hidalgo).

Rangel, M.—*Mineral Resources Durango;* [in Spanish].—See under Mexico (Durango).

———. *Review of Mexican Output,* 1911. —Mex. Mng. Jnl., Jan.,1912; p. 15; 2100 w; 35c.

EUROPE

Andrée, K.—*Notizen zur Geologie und Mineralogie Nidersachsens;* [Geologic and mineralogic notes on lower Saxony; two new baryte finds and zinc blende of Radau valley].—Niedersächs. Geol. Ver. zu Hannover, Jahresber, Vol. 3, 1911, pp. 84-89.

Bonikowsky, Dr.—*Die Oberschlesische Montanindustrie;* [The mining industry of Upper Silesia; coal, iron, zinc].—Technik & Wirtschaft, Oct. and Nov.,1911; pp. —; 75c. Also in Oberschlesisch. Berg- & Hm. Ver., Zts.; Jan.,1912; p. 11-20; 7500 w; 45c.

Delmer, Al.—*Statistique rétrospective des industries extractives et métallurgiques, période* 1901-1910; [Statistical review of Belgian mining and metallurgy, 1901-1910; coal and iron; siderurgy; zinc, lead, silver].—Annales d. Mines (Belgiq.), Vol. 17, No. 2; 1912; pp. 255-345; 95c.

Hillmann, W.—*Die wirtschaftliche Entwickelung der deutschen Zinkindustrie;* [The industrial development of the zinc industry of Germany].—Bergwirtsch. Mittlngn., April,1912; pp. 53-62; $1.

Krantz, Fr.—*Die Entwickelung der oberschlesischen Zinkindustrie in technischer, wirtschaftlicher und gesundheitlicher Hinsicht;* [Development of the zinc industry in Upper Silesia from the technical, industrial and sanitary points of view].—Kattowitz, 1911; 96 pp*; $2.50 (book).

Odriozola, A.—*Los obreros minero-metalurgicos del distrito de Santander;* [The mining and metallurgical industry of Santander, Spain].—Rev. Minera, May8,1912; p. 217; 5500 w; 35c.

Savoia, U.—*Miniere di zinco lombarde;* [Zinc mining, dressing and metallurgy in Lombardy and Upper Italy].—Milan,1911; pp. —; (book).

Schnass, —. *Ueber ein bulgarisches Galmeivorkommen;* [Zinc carbonate ores of the Izremec mine, Lakatnitz, Bulgaria].—Techn. Blätter, Apr.20,1912; p. 121; 3000 w; 35c.

Sidenvall, K.—*Om Oberschlesiens geologi och malmbrytning;* [Geology and ore deposits of Upper Silesia; coal, lead-zinc].—Jernkontor. Annaler, Bihang; Dec.,1911; pp. 971-978*; 45c.

Skinner, R. P., and others.—*Markets for Zinc Ores;* [Germany, France, Wales].—U. S. Consul. Rep., Feb.6,1912; p. 561; 1000 w; 20c.

Villasante, F. B.—*Cartagena Histórica;* [History of Cartagena, Spain].—Cartagena, 1912; 45 pp.; $1.50; (pamphlet).

———. *Statistik der Oberschlesischen Berg- und Hüttenwerke für* 1911; [Statistics of mining and metallurgy in Upper Silesia in 1911].—Oberschles. Berg- & Hüttenm. Ver., Zts., Feb.,1912; pp. 62-75; tables; 45c. Abstract in Montanist. Rundschau, Apr.16, p. 359-361; 45c.

ASIA; AFRICA; OCEANIA

Bain.—*Japan Mineral Production.*—See Japan.

Clark, D.—*Australian Mining & Metallurgy.*—Melbourne, 1911; 600 pp.*; $6.50 (book).

Fleger.—*Mineral Deposits of North Africa;* [In German].—See under N. Africa.

Hommel, W.—*Ueber indisches und chinesisches Zink;* [Review of zinc production of India and China].—Zts. f. angew. Chemie, Jan.19,1912; pp. 97-100*; 75c.

Mance.—*Australasia,* 1911.—See Australia.

Marriott.—*Transvaal,* 1911.—See Transvaal.

Pittmann.—*New South Wales,* 1911.—See Tin.

Read, T.—*Mining in China.*—See China.

———. *Australasian Mining,* 1911.—M. & S. P., Jan.6,1912; p. 56; 2400 w*; 35c.

———. *Production d'Algérie,* 1911.—Echo d. Mines, March11,1912; p. 306; 35c.

———. *Progress of the Zinc Industry;* [in Australia, U. S. and Japan].—M. & S. P., Apr.27,1912; p. 587; 1400 w; 20c.

GEOLOGY

Bain, H. F.—*Flats and Pitches of the Wisconsin Lead and Zinc District.*—"Types of Ore Deposits," by H. F. Bain, and others; 1911; pp. 77-102*.

Bergeat.—*Geology of Contact Ore Deposits, Concepcion del Oro, Mex.*—See Copper.

Beyschlag, Krusch and Vogt.—*Monograph of Ore Deposits;* [in German].—See under Gold.

Buckley, E. R.—*Lead and Zinc Deposits of the Ozark Region;* [Southeast and central Missouri, Joplin district, and Missouri-Arkansas].—"Types of Ore Deposits," by H. F. Bain and others; 1911; pp. 103-132*.

Wilson, J. B.—*A Broken Hill Problem: What Has Become of the Zinc;* [Discusses economic and geologic significance of deficiency of zinc in Broken Hill, N. S. W., oxidized zone].—Australian Mng. Standd., Dec.7,1911, p. 565; 2000 w; 35c.

ORE-DRESSING

Bruce, Jas. L.—*Ore Dressing in the Joplin District.*—E. & M. J., Feb.24,1912; p. 405; March2, p. 459; March9, p. 501; March16, p. 553; 15,000 w*; 75c.

Bryant, F. C.—*Process for Separating Blende from Barite;* [in central Missouri]. —E. & M. J., May11,1912; p. 929; 750 w; 25c.

Clerc, F. L.—*Igneous Concentration of Zinc Ore.*—E. & M. J., Jan.13,1912, p. 127; 6000 w; 25c.

Durell, C. T.—*Flotation of Zinc Ores.*—M. & S. P., May25,1912; p. 717; 1000 w; 20c. Reprint in Colo. School of Mines Mag., June,1912; p. 199; 1000 w; 65c.

Fabien, —. *Le traitement des minerais complexes de zinc et de plomb et le procédé du Bisulfite;* [Treatment of complex lead-zinc ores and the bisulphite process]. —Soc. Amicale d. . . Mineurs de Douai, Bull., March10,1912; pp. 140-144; 1500 w; 35c. Abstract in Echo d. Mines, Apr.11, p. 441; 1300 w; 35c.

Holtmann, —. *Das Schwimmaufbereitungsverfahren der Grube Friedrichssegen nach System Leuschner;* [The Leuschner oil-flotation process at the Friedrichssegen mines on the Lahn, Germany; chiefly for chalcopyrite, blende and galena].—Glückauf, March9,1912; pp. 388-393*; 50c. English abstract in Mng. Jnl., Apr.20, p. 402; 1000 w; 35c.

Hugon, E. C.—*A Plant for the Enrichment of Pyritic Blende Concentrates;* [Magnetic separation after roasting, Pierrefitte mines, Pyrenees, France].—Instn. of Mng. & Met'l'gy, Bull. 92, May,1912; pp. 9*; 50c.

MacGregor, F. S.—*Electrostatic Separation of Zinc Ores;* [Development of Huff processes in U. S. and Mexico].—Mex. Mng. Jnl., June,1912; p. 29; 1200 w*; 25c.

McClave, J. M.—*Milling the Tam O'Shanter Ore;* [Argentiferous lead-zinc; Ashcroft,, Colo.].—Mines & Minerals, March, 1912, p. 492; 1600 w*; 35c.

McClave, J. M.—*Recent Developments in Zinc Ore Dressing.*—Mng. Sci., Jan.25,1912, p. 90; 2000 w; 25c.

McLellan, J. J.—*Mining and Milling in the Joplin District.*—Canadian Mng. Jnl., March1,1912, p. 159; 1800 w*; 25c.

MacGregor, F. S.—*Electrostatic Separation in the San Juan District;* [Huff process at Sunnyside mine near Silverton, Colo., producing 40% zinc concentrate, with lead and copper recovery].—Mng. Sci., May23, 1912; p. 448; 1000 w*; 20c.

Mickle, K. A.—*Flotation of Minerals.*—Roy. Soc. of Victoria, Proc., Vol. 23, No. 2, March,1911; pp. —.
Abstract in Australian Mng. Standd., April5, p. 343; April12, p. 368; April20, p. 394; Apr.27, p. 416; 8000 w; 75c. Also in E. & M. J., Aug.12, p. 307; 6000 w; 25c. Also in Chemi. Met. & Mng. Soc. of S. Afr., Jnl., Nov.,1911, p. 136; 4500 w; 90c.
Also in Italian in Rassegna Mineraria, Oct.1, p. 157; 5600 w; 35c.

Mickle, K.—*Flotation of Minerals; Part 2;* [Read to Roy. Soc. of Victoria, Dec., 1911].—Australian Mng. Standd., Apr.11, 1912; p. 333; Apr.18, p. 357; Apr.25, p. —; 6500 w*; 65c.
Reprint in Australian Mng. Standd., Apr. 11,1912; p. 333; Apr.18, p. 357; Apr.25, p. 381; May 2, p. 403; 9000 w*; 80c.

Moldenhauer, Max.—*Die Methoden der Schwimmverfahren in der Erzaufbereitung;* [Review of flotation methods in ore dressing].—Metallurgie, Jan.22,1912; p. 72; 6000 w*; 50c.

Rice, C. T.—*Joplin Jigging Practice.*—E. & M. J., May18,1912; p. 983; 1800 w; 25c.

Rice, C. T.—*Joplin Hand Jig.*—E. & M. J., June1,1912; p. 1079; 1800 w*; 25c.

Scott, W. A.—*Tube Concentrator in the Coeur d'Alene* [at Morning mill, Mullan, Idaho].—M. & S. P., Dec.23,1911, p. 809; 600 w; 20c.

Wentworth, H. A.—*Electrostatic Concentration or Separation of Ores;* [Chiefly Huff process].—Amer. Inst. Mng. Engrs., Trans.; Feb.,1912; 16 pp*; 4500 w; 50c.
Abstract in Met. & Cheml. Engg., March. p. 167; 3000 w*; 35c.
Italian abstract in Rassegna Mineraria, May21,1912; p. 288; 1000 w; 45c.

———. *Efficiency in Concentration.*—Mng. Mag., Apr.,1912; p. 253; 1600 w; 45c.

———. *Murex Magnetic Co., Ltd.;* [Report of Chairman].—Mng. Jnl., Dec.23,1911, p. 1258; 8000 w; 35c.
1912, p. 21; 2100 w; 25c.

———. *Notes on the Elmore Flotation Process.*—Mex. Mng. Jnl., May,1912; p. 23; 1000 w*; 25c.

———. *The Hyde Flotation Process.*—E. & M. J., June1,1912; p. 106; 700 w*; 25c.

———. *The McQuisten Tube Mill Process;* [Oil flotation for zinc-lead slimes at Morning mill, Mullan, Idaho].—Mining & Engg. World, Jan.20,1912; p. 111; 750 w; 10c. Reprinted in Mines & Methods, Feb., p. 406; 25c. Also in W. Australian Mng., etc., Jnl., Apr.6, p. 14; 750 w; 35c.

ELECTRIC SMELTING; ELECTROLYSIS

Bleeker, W. F.—*An Electrolytic Method for the Reduction of Blue Powder;* [Zinc dust].—Amer. Electrochemi. Soc., Trans. for April,1912; pp. 9; 2800 w; 50c. Abstract in Mining & Engg. World, May4, p. 951; 2400 w; 10c.

Borchers, W.—*Ueber die Verarbeitung von sulfidischen oder oxydischen Zinkerzen im elektrischen Ofen;* [Metallurgy of zinc sulphide and oxide ores in the electric furnace].—Metallurgie, March8,1912; p. 153; J. I. Cohn].—Mining & Engg. World, Jan. 1000 w; 45c.

Drucker, K.—*Die Chloride von Zink und Quecksilber in wässiger Lösung;* [The chlorides of zinc and of mercury, and their electrolysis in watery solutions].—Zts. f. Elektrochemie, Apr.1,1912; p. 236; 7500 w*; 40c.

Eulenstein, Fr.—*Untersuchungen über den Einfluss von Lösungen von Eisen in Schwefeleisen auf Zinkblende;* [Bearing of solubility of iron in pyrite on the question of electric smelting of zinc blende].—Metallurgie, March8,1912; pp. 154-158*; 3000 w*; 45c.

Fitzgerald, F. A. J.—*A New Electric Resistance Furnace;* [For Imbert zinc smelting process; read to Amer. Electrochemi. Soc.; abstract].—Electrician, Jan.19,1912, p. 601; 2500 w; 35c.

French, A. G.—*The French Process;* [Nelson, B. C., plant for electrolytic extraction of zinc from Slocan lead-zinc-silver ores].—Canadn. Mng. Jnl., Jan.1,1912, p. 6; 1000 w; 25c.

Ganet, L.—*La fabrication du zinc au four électrique;* [Electric zinc smelting in Scandinavia].—Jnl. du Four Electriq., May1, 1912; p. 193; 1800 w; 35c. Reprint in Echo d. Mines, May9, p. 571; 35c.

Harbord, F. W.—*Zinc Smelting in Electric Furnaces;* [Report on de Laval process at Trollhätten, Sweden and Sarpsborg, Norway; abstract].—Canadn. Engr., Feb.22, 1912; p. 330; 2000 w; 25c.

Johnson, C. F.—*The Electric Zinc-Smelting Furnace.*—Met. & Cheml. Engg., May, 1912; p. 281; 2100 w*; 35c.

Johnson, W. McA.—*Johnson Continuous Electric Zinc Furnace.*—Iron Age, May2, 1912; p. 1082; 1600 w*; 30c.

Klein, O.—*Ueber die Löslichkeit von Zinkhydroxid in Alkalien;* [The solubility of zinc hydroxide in alkalis; from Nobel Inst. Meddelanden].—Berlin, 1912; 15 pp.*; (pamphlet).

Sammons, T.—*Electrolytic Recovery of Zinc;* [Brief notes on Yoshida process tried in Japan].—U. S. Consul. Rep., Dec.29,1911, p. 1600; 200 w; 10c.

Thomas, F.—*Elektrischer Widerstandsofen für beliebige Badlängen;* [Resistance oven for zinc smelting, with regulatable time duration of bath].—Metallurgie, March 8,1912; p. 158; 2000 w*; 45c.

———. *Electric Zinc Smelting Furnace;* Imbert process and patents].—Mng. & Engg. Rev., March1912; p. 254; 1400 w; 35c.

———. *Französisches Verfahren zur Zinkgewinnung;* [New French electric furnace for zinc recovery from blende].—Centralbl. d. Hütten & Walzwerke, March5, 1912; p. 118; 1000 w*; 35c.

———. *The Zinc Problem;* [Reviews French process].—Brit. Columbia Mng., etc., Record, Oct.,1911, p. 79; 1500 w; 25c.

———. *Zinc Smelting at Trollhattan.*—E. & M. J., Feb.10,1912; p. 314; 2100 w; 25c.

METALLURGY; CHEMISTRY

Ashcroft, E. A.—*Chlorination Process for Complex Ores;* [Reviews Ashcroft's recent patents].—Met. & Chemi. Engg., Feb.,1912, p. 117; 2000 w*; 35c.

Bassett, W. H.—*Zinc Losses;* [Symposium on conservation in zinc smelting].—Jnl. of Ind'l & Engg. Chem'y, March,1912, p. 164; 4000 w; 65c.

Brownlee, A. G.—*Malm Process for Complex Ores*].—See under Lead.

Bryden, C. L.—*Blast Roasting;* [Reviews various processes, including Dwight-Lloyd]. —Board of Trade Jnl. (Scranton), April, 1912; p. 19; 3600; 20c.

Carpenter, H. C. H.—*Copper-Zinc Alloys.* —See Alloys.

Clerc, F. L.—*The Utilization of the Zinc Carbonates and Silicates of Leadville, Colo.* —Colo. Scient. Soc., Proc., Sept.,1911, pp. 85-98; 65c. Abstract in Mng. Sci., Feb.22, p. 187; 2200 w*; 20c.

Eulenstein, Fr.—*Betrachtungen über die Wärmebilanz eines Siemens-Zinkofens;* [Heat reactions and thermal factors in the Siemens zinc furnace].—Metallurgie, May 22,1912; p. 328; June8, p. 353; June22, p. 396; 13,000 w*; $1.35.

Friedrich, A.—*Die Schwefelsäure-Produktion der oberschlesischen Zink industrie;* [Sulphuric acid production in the zinc smelters of Upper Silesia].—Techn. Blätter, Feb.17,1912, p. 52; 2000 w; 35c. Reprint in Zentralbl. f. Kunstdünger, Ind., March7, p. 73; March21, p. 85; 50c.

Friedrich, K. and A. Leroux.—*Arsenides;* [in German].—See under Thermic Metallurgy.

Gillet, C.—*Réduction de l'Oxyde de zinc par l'hydrogène;* [Reduction of zinc oxide by hydrogen, and reversibility of the process].—Soc. Chimiq. Belgiq., Bull; April, 1912; p. 106; 500 w; 65c.

Haines, W. B.—*The Effect of Temperature on the Ductility of Zinc;* [From Roy. Soc., Proc.].—Cheml. Engr., March,1912; p. 89; 1800 w; 35c.

Hall, R. G.—*Zinc Ore and Zinc Smelting;* Reviews smelting capacity and ore-prices in 1911].—M. & S. P., Jan.6,1912, p. 8; 1000 w; 35c.

Hasenclever, Max.—*Manufacture of Sulphuric Acid;* [Progress with pyrite, blende, galena and copper; Hunter Memorial lecture, Liverpool Univ., Oct.,1911; abstract]. —E. M. J., Jan.20,1912, p. 175; 3000 w; 25c.

Hedley.—*Smelting in Br. Columbia.*—See Copper.

Hofman, H. O. and W. Wanjukow.—*The Decomposition of Some Metallic Sulphates at an Elevated Temperature in a Current of Air.*—Amer. Inst. Mng. Engrs., Trans.; read Feb.,1912; p. —; $1.15.

Hommel, W.—*Origin of Zinc Smelting;* [In China and India].—E. & M. J., June15, 1912; p. 1185; 4000 w*; 25c.

In German in Zts. f. angew. Chemie, Jan. 19,1912; pp. 97-100*; 75c.

Hommel, W.—*Die Prinzipien der Blenderöstung in Muffelöfen;* [The principles of zinc blende roasting in the muffel furnace]. —Metallurgie, May8,1912; p. 281; 12,000 w*; 50c.

Ingalls, W. R.—*The Metallurgy of Zinc;* [Progress in 1911].—E. & M. J., Jan.6,1912, p. 41; 4500 w; 25c.

Jacobs, E.—*Metallurgy in British Columbia in* 1911.—See British Columbia.

Kobayashi.—*Zinc-Tellurium Alloys* (in German).—See Alloys.

Kohlschütter, V. and C. Ehlers.—*Versuche über Kondensation von Metalldämpfen;* [Tests on the condensation of metallic sublimates and vapors; arsenic, cadmium, zinc].—Zts. f. Elektrochemie, May15,1912; p. 373; 4000 w*; 45c.

Kowalke, O. L.—*The Volatility of Zinc Oxide.*—Amer. Electrocheml. Soc., Trans; read April,1912; 4 pp.; 1000 w; 50c. Reprint in Cheml. Engr., May, p. 215; 35c.

Liddell, D. M.—*Treating Metal Junk.*—E. & M. J., March2, p. 452; 4000 w*; 25c.

Mostowitsch, Wl.—*Ueber das Verhalten des Zinksulfats bei hohen Temperaturen;* [The behavior of zinc sulfate at high temperatures].—Metallurgie, Dec.22,1912, p. 763-791; 50c.

Nagel, O.—*Bemerkungen über die Lithoponefabrikation und ihre mechanische Vervollkommung;* [The process of lithopone manufacture and mechanical up-to-dateness].—Zts. f. angew. Chemie, March29, 1912; p. 617; 1800 w*; 50c.

Nitchie, C. C.—*A Rapid Method for the Determination of Sulfur in Roasted Blende.* —Jnl. of Ind'l & Engg. Chem'y, Jan.,1912, p. 30; 2400 w*; 65c. Abstract in Mining & Engg. World, Feb.10,1912, p. 340; 2100 w*; 10c.

Poole, W.—*Treatment of Broken Hill Ores.*—See under New South Wales.

Prost, Eug.—*Cours de Métallurgie des Métaux autres que le Fer;* [Treatise on Metallurgy of the Non-Ferric Metals].— Paris and Liège; 1911; 888 pp*; (book).

Rollandet, G. J.—*The Treatment of Zinc Sulphide as a Pigment.*—Mng. Sci., Dec.21, 1911, p. 557; 1000 w; 20c.

Rollandet, G. J.—*The Manufacture of Zinc Sulphide;* [Pipereau-Vila patents].— Mng. Sci., March14,1912, p. 250; 1200 w; 20c.

Rosenhain, W., and Archbutt, S. L.— *Aluminum-Zinc-Copper Alloys.* (See Alloys.)

Ruhoff, O. E.—*Magnetic Separation of Zinc-Iron Ores as found in Southwestern Wisconsin.*—Met. & Cheml. Engg., May, 1912; p. 278; 3200 w*; 35c.

Schmieder, P.—*The Schmieder Rotary Zinc Roasting Furnace;* [U. S. Pat. No. 1,004,916; German Pat. No. 244,131].— Mining & Engg. World, Nov.18,191; p. 1018; 1000 w*; 10c.

Also described in German in Metallurgie, May22,1912; p. 327; 1000 w*; 50c.

Schütz, E.—*Die Entwickelung der Zinkblenderöstung;* [Development of zinc blende roasting in Europe and America].—Metallurgie, Oct.22,1911, p. 635; Nov.22, p. 713; 10,000 w*; 80c.

English abstract of part 1, by O. Hahn, in E. & M. J., March16,1912, p. 557; 3600 w*; 25c.

French abstract in Rev. de Mét'gie, June, 1912; 211 w*; $1.15.

Sharwood, W. J.—*Analysis of Commercial Zinc Dust.*—See under Cyaniding.

Swart, S. W.—*Some Observations on the Zinc Recovery Problem;* [From Colo. School of Mines Quar'ly].—Mining & Engg. World, Jan6,1912, p. 18; 1000 w; 10c. Also in Mng. & Engg. Rev., Feb., p. 209; 1000 w; 45c.

Taylor, F. O., and others.—*Bibliography on Methods of Estimation of Zinc,* 1890-1911.—Jnl. of Ind'l & Engg. Chem'y, June, 1912; p. 468-469; 65c.

Traphagen, F. W.—*The Low-Grade Ore Problem in Colorado;* [From Colo. School of Mines Quar'l, Jan.,1912].—Mining &

Engg. World, March30,1912; p. 722; 1400 w; 10c.

Turner, T.—*The Behavior of Certain Alloys When Heated in Vacuo;* [Zinc distillation and copper refining; read to Instn. of Metals; discussion].—Engnrg., Jan.19,1912, p. 89; 750 w; 30c.

Voigt, Dr.—*Rapid Determination of Zinc Ores.*—Mng. Jnl., Feb.17,1912; p. 178; 1200 w; 35c. Reprint in Mng. Sci., Apr.11, p. 330; 20c. Also in Mex. Mng. Jnl., June, p. 43; 1000 w; 25c. Also in Mining & Engg. World, July20, p. 112; 450 w; 10c.

Associazone fra gli Industriali Metallurgici Italiani.—*The Metallurgic Industry in Italy; Description of Some of the Principal Works.*—Milan, 1911; 430 pp.*; $2.00.

"A Smelter."—*Zinc Smelting in Kansas and Oklahoma.*—E. &. M. J., Apr.27,1912; p. 849; 3200 w; 25c.

S. E.—*De Metalurgia;* [Progress in Metallurgy in Europe and elsewhere; 1: zinc]. —Rev. Minera, Apr.16,1912; p. 177; Apr. 24, p. —; 3500 w; 50c.

———. *Metallic Zinc in Zinc Dust;* [Methods of Determination].—E. & M. J., Jan.20,1912, p. 165; 600 w*; 25c.

———. *The Present Status and Prospects in the Metallurgy of Zinc and Lead.*—Met. & Cheml. Engg., Jan.,1912, p. 5; 1200 w; 35c.

PLATING; GALVANIZING

Arthur, W., and W. H. Walker.—*Structure of Galvanized Iron.*—Jnl. of Ind'l & Engg. Chemy., June,1912; p. 397; 1600 w*; 65c.

Johnson, A. R. and W. R. Woolrich.—*On the Nature of Zinc Cementizing* (Sherardizing).—Amer. Electrochemi. Soc., Trans; read April,1912; 11 pp*; 3000 w*; 50c.

Abstract in Chemi. Engr., Apr.,1912, p. 170; 3000 w*; 35c. Also in M. & S. P., Apr. 20, p. 569; 1200 w; 20c.

Kröhnke, O.—*Beitrag zur Frage der Rohrverzinkung;* [The zinc plating of pipes].—Gesundheits-Ingenieur, 1911, No. 40; 11 pp; 25 figs; 75c. Also published separately, Munich, 1912.

Liggett, T.—*The Sherardizing Process; Galvanizing by the Formation of Zinc-Iron Alloy;* [from "The Foundry," abstract].—Engg. Mag., May,1912; p. 277; 1500 w; 35c.

Sang, M.—*Le zingage du fer et de l'acier;* [Memoir on zinc plating of iron and steel; the various processes].—Rev. de Mét'l'gie, Jan.,1912; pp. 1-31*; Feb., pp. 78-111*; March, pp. 160-186*; May, pp. 343-362*; $4.25.

Schoop, M. U.—*Die Verzinkung nach dem Schoopschen Metallspritzverfahren;* [Zinc plating by the Schoop metallic-spray process].—Chemiker Ztg., Dec.28,1911, p. 1434; 3000 w; 25c.

Storey, O. W.—*The Sherardizing Process;* [Dry galvanizing process in zinc dust].—Wisconsin Engr., Apr.,1912; p. 300; 3500 w; 30c. Abstract in Mng. Sci., July4, p. 562; 1000 w; 20c.

———. *Atomized Metals;* [Chemical Process Co. equipment for atomizing lead, zinc dust, etc.].—Met. & Cheml. Engg., March,1912; p. 180; 1800 w*; 35c.

MISCELLANEOUS

Massart, E.—*Production et Valeur de l' Argent, du Plomb et du Zinc;* [Production and Values of the World's Silver, Lead and Zinc].—Paris, 1911; pp. —; $1.00 (pamphlet).

———. *Joplin Zinc-Ore Prices;* [Discusses basis].—Mining & Engg. World, Feb. 10,1912; p. 363; 550 w; 10c.

———. *N. Y. Metal Prices for 14 Years.* —Iron Age, Jan.18,1912; p. 192; charts; 30c.

———. *Protest Against Lead-Zinc Tariff Reduction;* [Comparative costs in Mexico and in Joplin district, Mo.].—Mining & Engg. World, March2,1912; p. 512; 1200 w; 10c.

———. *Spelter Production of the World;* [H. R. Merton & Co. figures, 1909-1911].—E. & M. J., Jan.27,1912, p. 202; 300 w; table; 25c.

———. *The Metal Markets in 1911-II; Spelter, Lead.*—Mng. Jnl., Jan.27,1912; p. 83; 2500 w; 35c.

———. *The Zinc Industry in 1911;* [Review of U. S. production, German imports, and spelter markets].—E. & M. J., Jan.6.

———. *Zinc en 1911;* [World's zinc production in 1911].—Echo d. Mines, Feb.1, 1912; p. 136; 100 w; tables; 35c.

See also Paints under Non-Metals.

Zirconium

See "Thorium and Rare Earths."

Miscellaneous Metals and Non-Metals

Badermann, —. *Mineralschätze Rumäniens;* [The mineral resources of Roumania; chiefly oil and mineral waters; also cement, coal, iron, cobalt, nickel, tin, mercury, etc.]. —Zts. f. Angew. Chemie, March22,1912; p. 576; 1500 w; 50c.

Dominian, L.—*Mining in Turkey in 1911;* [Chiefly chrome ore, meerschaum, oil; also antimony, asphalt, coal, borax, copper, emery, gold, pyrite, lead, manganese, mercury, silver and zinc ores].—M. & S. P., Jan. 6,1912, p. 58; 2500 w*; 35c.

Flegel, K.—*Die wirtschaftliche Bedeutung der nutzbaren Lagerstätten des Königreichs Serbien;* [The mineral industry and resources of Servia].—See under Copper.

Georgiades, A. J.—*Les mines de la Gréce;* [The mines of Greece; gold, silver, lead, zinc, chrome-iron; from Génie Civil]. —Soc. Amicale d. . . Mineurs de Douai, Bull., March10,1912; p. 144; 1200 w; 35c.

Hess, F. L.—*The Production of Tungsten, Nickel, Cobalt, Vanadium, Titanium, Molybdenum, Uranium, Tantalum and Tin in 1910.*—U. S. Geol. Surv., Mineral Resources f. 1910; 1911; 36 pp.; 10c.

Horvathy, J.—*Ungarns Berg- und Hüttenwesen in 1910;* [Review of the mining and metallurgical industries of Hungary in 1910; coal, oil, asphalts, antimony, alum, tar, gold-silver, copper-lead, zinc, iron, bismuth, salt, etc.].—Oestr. Zts. f. Berg- & H-wesen, March9,1912; p. 131; March16, p. 150; March23, p. 162; 5000 w; tables; $1.

Jüngst, E.—*Die Bergwerksproduction des viederrheinisch-westfälischen Bergbaubezirks im Jahre, 1911;* [Review of syndicate and non-syndicate mine production in the Lower Rhine-Westphalia region, 1911; chiefly coal, coke, and by-products; also iron, zinc, lead, copper, pyrite, salt].—Glückauf, May18,1912; p. 795-806; tables; 5000 w; 50c.

Martell, P.—*Der Bergbau in der Schweiz;* [Brief review of asphalt, iron, gypsum, lime, slate].—Montanist. Rundschau, Jan.1,1912, p. 16; 2000 w; 45c.

Shaw, S. F.—*Data of the World's Principal Mines;* [Annual tonnage, profits, divi-

dends, costs per ton, ore reserves].—E. & M. J., Jan.13,1912, p. 133; 3 pp; tables; 25c.

Skewes, Edw.—*Mining in Gt. Britain in* 1911; [Iron, copper, tungsten, lead, tin].—E. & M. J., Jan.13,1912, p. 123; 1700 w; 25c.

Wright, Chas. W.—*Mining Industry in Italy in* 1911; [Sulfur, lead-zinc, iron, quicksilver, copper, pyrite, manganese, antimony, gold, silver and tin].—M. & S. P., Jan.6, 1912, p. 55; 2000 w; 35c.

———. *Aussenhandel Spaniens in Bergwerks und Hüttenerzeugnissen im Jahre* 1911; [Imports and exports of mineral products in Spain, 1910, 1911].—Glückauf, Apr.13,1912; pp. 607-608; tables; 50c.

———. *Bergbau und Hüttenindustrie Italiens im Jahre* 1910; [Statistics of mine and smelter production in Italy, 1910].—Montanist. Rundschau, March16,1912; pp. 251-254; tables; 45c.

———. *Bergwerke, Steinbrüche und Salzwerke im Oberbergamtsbezirk Bonn* 1911; [Statistics of accidents and production in the Bonn inspection district, 1911; coal, lignite, iron, zinc, lead, manganese, pyrite, copper, silver and nickel ores; slates; salt].—Glückauf, Apr.13,1912; p. 607-608; tables; 50c.

———. *British Mineral Statistics,* 1910; [Review of official report].—Mng. Jnl., Dec. 23, p. 1251; 1800 w; 35c.

———. *British Mining Output in* 1911.—Mining & Engg. World, April6,1912; p. 756; 200 w; table; 10c.

———. *Bergbau und Hüttenindustrie Italiens im Jahre* 1910; [Review of mining and metallurgy in Italy, and production, in 1910].—Glückauf, Dec.16,1911, p. 1961; 4000 w; tables; 50c.

———. *Die belgische Bergwerksindustrie im Jahre* 1910; (Review of mining in Belgium in 1910; chiefly coal, coke and briquetting; also iron, manganese, zinc, pyrite, lead ores].—Glückauf, Nov.11,1911, p. 1769-1772; 50c.

———. *Die Berg- und Hüttenwerksproduktion Ungarns im Jahre* 1910; [Mining and metallurgic production of Hungary, 1910; coal. iron, coke, gold, lignite, silver, manganese, copper, zinc, sulphur, oil, asphalt, mineral wax, antimony, alums].—Montanist. Rundschau, Feb.1,1912; p. 114; 2000 w; 45c.

———. *Die Bergbau des Königreichs Sachsen im Jahre* 1910; [Saxony's mineral production, 1910; abstract from official report; chiefly coal, lignite and briquets; also silver-lead, lead-zinc, bismuth, cobalt, nickel, tungsten, iron, tin, fluorspar, chalcopyrite, pyrite, sulphur].—Glückauf, Nov.18, 1911, p. 1805-1808; 50c.

———. *Der Aussenhandel Oesterreichs in den Produkten der Montanindustrie im Jahre* 1911; [Ore and mineral imports and exports of Austria 1910 and 1911].—Montanist. Rundschau, Feb.16,1912; p. 160-2; 2000 w; tables; 45c.

———. *Der Bergbau in Griechenland* 1910; [Review of production in Greece in 1910; iron, manganiferous iron, manganese, zinc, lead, nickel, chrome, copper, pyrite and pyritiferous ores; magnesite, lignite, gypsum, salt, emery, mill-stones, marble].—Montan Ztg., Feb.1,1912; p. 42; 1000 w; 45c.

———. *Der Bergwerksbetrieb im Preussischen Staate während des Jahres* 1910; [Review of statistics of the mining industry of Prussia in 1910; coal, lignite, hydrocarbons, iron, zinc, lead, copper and salt mining; also silver, nickel, arsenic, manganese, sulphur, stone; also smelter output of pig-iron, zinc, lead, copper, gold, silver, nickel].—Zts. f. d. Berg-, H-, u. Salinenwesen, Vol. 59, 1911, Statistical No. 2; pp. 71-151; $1.00.

———. *Die Bergwerks- und Hüttenindustrie Oesterreichs im Jahre* 1910; [Statistics and production in the mining and metallurgical industries of Austria in 1910 and 1909; iron and steel, zinc, lead, silver, mercury, copper, gold, uranium, tin, arsenic, copper and iron sulphates, pigments, coal, graphite, manganese, sulphur, tungsten, asphalt, antimony, salines].—Glückauf, Dec.9,1911, p. 1923-1927; 50c.

———. *Die chemische Industrie Dänemarks und seine Ein- und Ausfuhr im Jahre* 1910; [Chemical industry of Denmark, with imports and exports in 1910; cryolite, soda, salt, superphosphate, sulphuric acid, cement].—Chemiker Ztg., Jan. 30,1912; p. 116; 1000 w; 30c.

———. *Die Gewinnung der Bergwerke, Salinen und Hütten im deutschen Reich und im Luxemburg in Jahre,* 1911; [Statistics of production of mines, salines and smelters in Germany and Luxemburg, 1911; coal, lignite, asphalt, graphite, oil, rock salt, potash, bitter salts, borax, iron, zinc, lead, copper, silver, gold, arsenic, manganese, pyrite, alums, sulphur, sulphuric acid, sulphates].—Glückauf, May4,1912; pp. 717-721; tables; 50c.

———. *Die Produktion der italienischen chemischen Industrie im Jahre* 1910 *und Ihre Rentabilität;* [Output, value and profits in the chemical, mining and metallurgical industries of Italy, 1910].—Chemiker Ztg., Feb.13,1912; p. 176; 1500 w; tables; 30c.

———. *Ein- und Ausfuhr der wichtigsten Bergwerks- und Hüttenerzeugnisse im Deutschen Zollgebiet* 1911 *und* 1910; [Table of imports and exports of mineral and metallurgic products in Germany, 1911 and 1910].—Zts. f. d. Berg-, H-. & Salinenw., Vol. 60, No. 1; 1912; p. 52; table; $1.50.

———. *Erzfrage und Deutsche Industrie;* [German ore and metal production, consumption and import requirements; lead, copper, zinc, tin, silver].—Erzbergbau, Jan. 1, 1912, p. 8; 1800 w; tables; 35c.

———. *Estadistica minero-metalurgica de Españo año* 1910; [Statistics of mineral and metallurgic production in Spain, 1910].—Rev. Minera, May8,1912; p. 224; 1000 w; tables; 35c.

———. *Exploitation minière en Norvège en* 1911; [Review of principal mines of Norway, 1911; pyrite, copper, silver; 2; Lead-zinc, nickel, iron.]—Echo d. Mines, Apr.15,1912; p. 459; (2) Apr.18; p. 476; 2200 w; 50c.

———. *German Metal and Mineral Trade in* 1911; [Imports and Exports of ores of antimony, arsenic, chrome, copper, gold, iron, lead, manganese, nickel, platinum, pyrites, silver, tin, tungsten, zinc, to and from various countries].—Mng. Jnl., Feb. 10,1912; p. 138; 1000 w; tables; 35c.

———. *German Mining in* 1911; [General review of coal, iron, potash, petroleum].—M. & S. P., Jan. 13,1912, p. 105; 1000 w; 20c.

———. *Importazione ed esportazione italiana negli anni* 1910-1911; [Italian imports and exports, 1910 and 1911; metals and metal ores].—Rassegna Mineraria, May 1,1912; p. 250; tables; 35c.

———. *La production minière de nos colonies;* [Output and value of the mineral production of the French colonies].—Soc. Amicale d. . . Mineurs de Douai, Bull.; Feb.10,1912, p. 82; 1000 w; 35c.

———. *Les mines métalliques du bassin central de la France partie sud-est;* [The metal production of the central portion of southeast France; antimony, mispickel, silver-lead, tin, gold, manganese, iron].—Rev. Ind'l du Centre, Feb.10,1912; p. 1; 1000 w; 35c.

———. *Mineral Production of Russia;* [1910, 1911; gold, platinum, copper, zinc, pig-iron, steel, coal].—E. & M. J., Junel, 1912; p. 1074; 100 w; table; 25c.

———. *Mineral Resources of the District of Mersine, Asia Minor;* [Iron; chrome; copper; zinc-lead-silver; from "Levant Trade Review"].—Mining & Engg. World, Jan.13,1912; p. 62; 500 w; 10c.

———. *Mineral Resources of Turkey in Asia;* [Trebizond, Mersine, Smyrna and Harput districts; chiefly copper, silver-lead, zinc, chrome iron, iron, emery, mercury, antimony, gold, nitre, coal].—Levant Trade Rev., Nov.,1911, p. 131-156; 75c.

———. *Mines Output of Sweden;* [1910 and 1909; iron, coal, silver-lead, copper, zinc, manganese, pyrite, feldspar, quartz, alum].—Mining & Engg. World, Junel, 1912; p. 1150; 100 w; table; 10c.

———. *Notre commerce extérieur en minerais pendent l'année* 1911; [Imports and exports of ores, minerals and mineral products of France, 1911, 1910 and 1909].—Echo d. Mines, Feb.8,1912; p. 163; 1000 w; tables; 35c.

———. *Output of Minerals under the Coal Mines Regulation Acts During* 1911; [Official preliminary figures for Britain by districts; coal, baryte, clay and shale, fireclay, igneous rock, iron pyrite, iron ore, limestone, oil shale, sandstone; labor statistics, etc.].—Coll'y Guardn., March8,1912; p. 496; 1000 w; tables; 30c.

———. *Output of Greece,* 1910; [Official figures, chiefly iron and lead ore, magnesite, emery; also zinc, manganese, nickel, chrome, copper, pyrite, sulphur, lignite, gypsum, salt, marble, millstones].—Mining World, Feb.24,1912; p. 455; 200 w; table; 10c.

———. *Russia in* 1911; [Oil, copper, gold, platinum, manganese].—Mng. Jnl., Jan.6,1912, p. 27; 2000 w; 35c.

———. *Russian Mining in* 1911; [Brief notes on coal, copper, gold, platinum, zinc, lead and oil fields].—M. & S. P., Jan.13,1912, p. 110; 1800 w; 20c.

———. *Russland's Bergbau und Hüttenindustrie im Jahre* 1910; [Mining in Russia in 1910; coal, oil, copper, iron and steel].—Montanist. Rundschau, Dec.16,1911, p. 1156; 1000 w; 35c.

———. *Schwedens Bergbau und Eisenindustrie im Jahre* 1910; [Sweden's iron and mining industry in 1910; iron, coal, zinc, pyrite, feldspar, quartz, copper, manganese, silver-lead].—Glückauf, Nov.25,1911, p. 1847-1851; 50c.

———. *Statistik der Oberschlesischen Berg- und Hüttenwerke für* 1911; [Statistics of mining and metallurgy in Upper Silesia in 1911; lead, zinc, coal, coke, briquets, pig-iron, steels, silver].—Oberschles. Berg- & Hüttenm. Ver., Zts; Feb., 1912; pp. 62-75; tables; 45c.

———. *Statistik der oberschlesischen Berg- und Hüttenwerke für das 3. Quartal* 1911; [Statistics of Upper Silesian mining and smelting production, 3d quarter, 1911; coal, iron, lead, zinc, coke, briquetts, silver].—Oberschles. Berg- u. Hüttenm. Ver., Zts., Dec.,1911, p. 549-554; tables; 45c.

———. *Statistik über die Ein- und Ausfuhr von Erzen und einiger wichtiger Rohmetalle im Jahre* 1911; [Statistics of imports and exports of ores and some of the more important crude metals, Germany, 1911].—Erzbergbau, Feb.1,1912; p. 38; 1000 w; tables; 35c.

———. *The Prussian Mining Industry;* [General review of coal, iron, zinc, lead, copper, silver, gold, nickel, arsenic, manganese, sulphur, etc.].—Mng. Jnl., Feb.10, 1912; p. 129; 2000 w; 35c.

CHAPTER VI.—FUELS†: COALS; COKE; GAS; OILS; PEAT.

COALS

Coal Mines, Mining; Coal Trade (by countries)

ALASKA-WESTERN CANADA

Bell, Geo.—*Lignite in Saskatchewan.*—Canadn. Engr., Feb.22,1912; p. 327; 600 w; 25c.

Brooks, Alfr. H.—*The Future of Alaska Coal.*—Amer. Mng. Congr., 1911; Proc., Vol. 14; pp. 291-298.

Clapp, C. H.—*Geology of Nanaimo, B. C., Coal District;* [Read to Canadian Mng. Inst.].—Canadian Mng. Jnl., May15,1912; p. 334; 1100 w; 25c.

Fisher, Hon. Walter L.—*Address on Alaska Problems before American Mining Congress, Oct.*27,1911.—Washington, 1911; 26 pp.; (pamphlet).
Reprint in Coal Trade Bull., Nov.1, p. 31; 9500 w; 25c. Abstract and discussion in E. & M. J., Nov.11, p. 925, 934; 5600 w; 25c. Also in Black Diamond, Nov.4, p. 18; 4000 w; 30c. Also in M. & S. P., Nov.25, p. 674, p. 672; 3500 w; 20c. Amer. Mng. Congr., Proc., Vol. 14, 1911, pp. 363-389.

Galloway, C. F. J.—*Bear River Coal Field, B. C.*—Canadian Mng. Jnl., May15, 1912; p. 335; Junel, p. 368; 1500 w; 40c.

Galloway, C. F. J.—*Coal Lands in Northern Cariboo, B. C.*—Canadian Mng. Jnl., Apr.15,1912; p. 278; 1000 w*; 25c.

Griffith, Wm.—*The High-Grade Coals of Alaska.*—Amer. Mng. Congr., Proc., Vol. 14, 1911, p. 329-333

Hedley, R. R.—*New Coal Fields in the Northern Interior of British Columbia;* [Read to Canadian Mng. Inst., Western branch].—Canadian Mng. Jnl., March15, 1912, p. 207; 1600 w; 25c.

Jacobs, E.—*Review of Mining and Production in British Columbia in* 1911.—See British Columbia.

Jacobs, E.—*The Coal Fields of Western Canada.*—Coal Age, May4,1912; p. 968; 1800 w; 20c.

Jacobs, E.—*Coal Mining in British Columbia;* [Review for 1911].—M. & S. P., Jan.6,1912, p. 70; 600 w; 35c. Also in Coal Age, Jan.13, p. 454; 800 w; 20c.

Joslin, F.—*The Alaskan Coal Situation.*—Amer. Mng. Congr., Proc., Vol. 14, 1911, pp. 351-362.

Leehey, M. D.—*Coal and Transportation in Alaska;* [also discusses and opposes leasing system].—Amer. Mng. Congr, Proc., Vol. 14, 1911, pp. 337-350.

Martin, G. C. and F. J. Katz.—*Geology and Coal Fields of the Lower Mantanuska Valley, Alaska.*—U. S. Geol. Survey, Bull. 500; 1912; 98 pp.*; 10c. Abstract in M. & S. P., Apr.6,1912; p. 499; 2000 w; 20c.

McEvoy, Jas.—*Report on the Brule Lake Coal Claims;* [N. Alberta Coal Syndicate]. Canadian Mng. Jnl., March1,1912, p. 155; 4500 w*; 25c.

Robertson, W. F.—*Coal Mining in British Columbia in* 1911; [Illustrated abstract from provincial report].—Coll'y Guardn., Apr.17,1912; p. 24; 3000 w*; 35c.

Wright, F. S.—*Report on the Groundhog Mountain Coal Feld, Br. Columbia.*—B. C. Mng. Exchange, April,1912; p. 12; May, p. 12; 2700 w*; 65c.

Wynne-Roberts, R. O.—*Saskatchewan Fuels and Gas;* [Lignite resources and their development; read to Regina Soc. of Arts & Sci.].—Canadian Engr., March21,1912; p. 430; 3000 w; 25c.

Canadian Mng. Inst., Western Branch.—[*Proceedings and Short Abstracts of Papers Read at 12th Annual Meeting, Vancouver, Feb.*,1912].—B. C. Mng. Exchange, Feb., 1912; p. 14; 9000 w; 45c. Also in Canadian Mng. Jnl., Apr.1, p. 235; 3500 w; 25c.

———. *Bear River Coal Field.*—Brit. Columbia Mng. Exchange, April,1912; p. 17; 1000 w*; 35c.

———. *British Columbia's Coal Mines;* [Review for 1911].—Canadian Engr., May 23,1912; p. 712; 1500 w; 25c.

———. *Coal Mining in Alberta in* 1910; *Annual Report of the Coal Mines Branch, Alberta.*—Canadian Mng. Jnl., Feb.1,1912; p. 75; p. 93; Feb.15, p. 125; 9000 w*; 35c. Illustrated abstract in Coll'y Guardn., Apr.17, p. 26; 1000 w*; 35c.

———. *Coal Mining at Queen Charlotte Islands, B. C.*—Brit. Columbia Mng., etc., Record, Oct.,1911, p. 84; 600 w; 25c.

———. *Development of Alaskan Coal Fields;* [Favors commission form of administration].—Engg. Record, March16,1912; p. 282; 1000 w; 20c.

———. *The Anthracite Discoveries in Northern British Columbia.*—B. C. Mng. Exchange, Dec.,1911, p. 15; 1200 w; 35c.

EASTERN CANADA

(Including Canada at large)

Denis, T. C.—*The Coal Fields of Canada.*—Canada Dept. Mines, Mines Branch Rep. No. 83; pp. 21-128*; $1.25.

Gray, F. W.—*The Coal Trade of Nova Scotia During* 1911; *A Resumé.*—Canadian Mng. Jnl., Jan.15,1912, p. 48; 5500 w*; 25c.

McLeish, J.—*The Production of Coal and Coke in Canada in* 1910.—Canada Dept. Mines, Mines Branch Publication No. 116;

Porter, J. B., and others.—*An Investigation of the Coals of Canada, with Reference to their Economic Qualities; as Conducted at McGill University under the Authority of the Dominion Government.*—Canada Dept. Mines, Mines Branch; 6 volumes. Volume 1, 1912; Report No. 83; pp. 233; charts, plates; $1.25; Vol. 2; p. 189*; $1.25.

Dept. of Mines of Nova Scotia.—*Report for* 1911.—Canadian Mng. Jnl., March 15, 1912, p. 200; April 1, p. —; 2000 w*; 40c.

———. *Coal Mining in Nova Scotia in* 1911.—Coll'y Guardn., Apr.17,1912; p. 27; 1500 w*; 35c.

———. *The Coal Production of Canada,* 1910 *and* 1911; [From McLeish's official reports].—Coll'y Guardn., Apr.17,1912; p. 19; 3000 w*; tables; 35c.

———. *The Coal Resources of Canada;* [From report of Canada Conservation Commission].—Coll'y Guardn., Apr.17,1912; p. 17; 6000 w*; 35c.

APPALACHIAN STATES

(Including U. S. at large)

Butler, J. E.—*Stearns Mines in Kentucky;* [Abstract; read to Kentucky Mng. Inst.].—Coal Age, Dec.23,1911, p. 341; 1500 w*; 20c. Also in Mines & Minerals, March, 1912, p. 481; 1600 w*; 35c.

†Including By-Products.

Cartlidge, O.—*Mine No. 3, Saline County Coal Co., Penn.*—Mines & Minerals, Feb., 1912; p. 387; 2000 w*; 35c.

Evans, A. W.—*Lookout Mountain Coal Measures;* [Tenn., Ala., Ga.].—Mines & Minerals, June,1912; p. 654; 2400 w*; 35c.

Johnston, J. K.—*Characteristics of the Thick-Vein Freeport Coal;* [Read to Coal Mng. Inst. of America; abstract].—Coal & Coke Op.. Jan.11,1912, p. 20; 2000 w; 25c. Also in Coal Trade Bull., Feb.1, p. 37; 2400 w; 25c.

Jones, J. H.—*Review of Year's Coal Trade,* 1911.—Coal Age, Jan.6.1912, p. 419; 1200 w; 20c.

Laing, J.—*West Virginia Production for Year Ending June 30,* 1911; [Abstract of official report].—Coal & Coke Op., Feb.29, 1912; p. 143; 1000 w; table; 20c. Also in Coal Trade Bull., March1, p. 25; March15, p. 27; 3000 w; table of companies; 35c.

Ludlow, Edw.—*The Smokeless-Coal Field of West Virginia.*—Mines & Minerals, March, 1912; p. 467; 2000 w*; 35c. Also in Coal Trade Bull., May1, p. 55; 2000 w; 25c.

Luty, B. E. V.—*The Pittsburgh District in* 1911; [Coal review].—Coal Age, Jan.6, 1912, p. 413; 750 w; 20c.

Marshall, J. J.—*The Removal of Coal From the No. 2 Gas Seam in the Kanawha District;* [Reviews general mining practice; read to W. Va. Coal Mng. Inst., Dec.,1911]. —Coal Trade Bull., Jan.15,1912, p. 47; 5000 w; 25c.

Maynard, T. P.—*Portland Cement and Coal Resources of the Southern States.*—Amer. Mng. Congr., 1911; Proc., Vol. 14; pp. 208-213.

Parker, Edw. W.—*Coal Production in* 1911; [Preliminary estimates for the U. S.]. —Coal & Coke Op., Jan.4.1912. p. 13; 2000 w; 25c. Also in Mng. Sci., Jan.25, p. 78; 3000 w; 25c. Also in Mining & Engg. World, Jan.27, p. 165; 3500 w; 25c.

Parsons, F. W.—*Mining Coal on the Virginian Railroad;* [Describes tributary coal fields in southern W. Virginia].—Coal Age, May18,1912; p. 1039; May25, p. —; 3000 w*; 30c.

Roberts, W. D.—*Mine Developments in the Southern States;* [New coal developments in W. Va.-Va.-Kent'y district].—Mining & Engg. World, Apr.13,1912; p. 807; 1000 w; 10c.

Roderick, Jas. E.—*Report of the Dept. of Mines of Pennsylvania,* 1910; *Vol. I, Anthracite; Vol. II, Bituminous.*—Harrisburg, Penn.; 1911; pp. 608; 983; $1.00.

Shiflett, R. A.—*Annual Report of the Mining Department of Tennessee for* 1910. —Nashville, 1911; 155 pp; $1.

Skaggs, W. H.—*New Field Uncovered in Alabama District;* [Coalfields north of Tuscaloosa].—Black Diamond, Jan.13,1912, p. 15; 2000 w*; 30c.

Stone, R. W.—Coal on Dan River, N. Car. —U. S. Geol. Survey, Bull. 471-B; 1912; pp. 35*; 20c.

Tupper, C. A.—*The Roden Co.'s Plant in Alabama;* [Roden Coal Co. mines, Cahaba field, Bibb county].—Coal Age, March30, 1912; p. 800; 4000 w*; 20c.

Wheelwright, J. H.—*Coal Development in Eastern Kentucky;* [Consolidation Coal Co. plans].—Manffrs. Record, Feb.22,1912; p. 49; 2000 w; 25c. Also in Coal Trade Bull., March15, p. 30; 2000 w; 25c.

———. *Progress in Kentucky Geology;* [Coal fields].—Mines & Minerals, June, 1912; p. 649; 1500 w; 35c.

———. *Alabama Cons. Coal & Iron Co.*— Manffrs. Record, Feb.22,1912; p. 102; 2000 w*; 65c.

———. *Anthracite Stocks;* [At U. S. tidewater, annually, 1906-1911].—Black Diamond, Feb.10,1912; p. 19; 500 w; 30c.

———. *Anthracite Coal Mining;* [Statistics of the industry in 1909; from Census report].—Coal Trade Bull., Dec.15,1911, p. 47; 1200 w; 25c.

———. *Bituminous Mines, Pennsylvania,* 1911; [Review of production].—Coal Age,

———. *Coal and Coke Exports in* 1911; [From U. S.].—Coal Age, Jan.6,1912, p. 417; 1400 w; 20c.

———. *Coal and Coke in* 1911; [General summary of U. S. production].—E. & M. J., Jan.6,1912, p. 98; 1000 w; 25c.

———. *Coal and Coke Production in the United States;* [By states, 1910 and 1911]. —Coal Age, Jan.6,1912, p. 424; 300 w; tables; 20c.

———. *Coal Industry of Alabama in* 1911.—Coal Age, Jan.6,1912, p. 405; 200 w; 20c.

———. *Coal Industry in the United States During* 1911; [Review of production by states and prices].—Coal Trade Bull., Jan.2.1912; p. 21-24, 56; 25c.

———. *Electrical Equipment, D. L. & W. Mines, Pa.*—Coal Age, March16,1912, p. 742; 2100 w*; 20c. Also in Coal & Coke Op., March21,1912, p. 190; 2100 w*; 20c.

———. *Equipping a Mine to Overcome a Bad Record;* [Electrification of gaseous Harwick colliery, Cheswick, Penn.].—Black Diamond, Jan.6,1912, p. 15; p. 30; 2000 w*; 30c.

———. *Pennsylvania Coal Production in* 1911; [By districts and companies].— Coal Trade Bull., March1, p. 42; March15, p. 34, p. 46; April 1, p. 30; tables; 50c.

———. *Some Coal Statistics for* 1911; [Shipments in various districts; from "Monthly Summary of Commerce & Finance"].—Coal Age, March16,1912, p. 745; 1000 w; tables; 20c.

———. *Stripping Made Possible by Improved Machines;* [Practice in eastern Kentucky coal fields].—Black Diamond, Apr.20, 1912; p. 20; 1500 w*; 30c.

———. *The Coal & Coke Ry. of West Virginia and Its Tributary Coalfields.*— Black Diamond, Feb.10,1912; p. 20; 1200 w*; 30c.

———. *West Virginia During* 1911; [Coal review; also Virginia].—Coal Age, Jan.6,1912, p. 415, p. 416; 1600 w; 20c.

CENTRAL STATES

Boyle, Ed.—*The Coal Industry of Oklahoma,* 1911.—Coal Age, Jan.6,1911, p. 411; 750 w; 20c.

Garcia, J. A.—*The Dewar, Okla., Coal Field.*—Coal Age, Apr.,20,1912; p. 898; 1800 w*; 20c.

Harrison, J.—*The Ohio Coal Industry for* 1911.—Coal Age, Jan.6,1912, p. 410; 1200 w; 20c.

Hibbs, Wm.—*Mining the No. 8 Seam in Ohio;* [Practice on Pittsburgh seam].—Coal Age, May18,1912; p. 1036; 1500 w*; 20c.

Ijams, J. W.—*Cheap Stripping with Shovels Near Surface;* [Stripping in open-cut coal mines near Danville, Ill.].—Black Diamond, Jan.27,1912. p. 20; 1200 w*; 30c. Abstract in M. & S. P., March16, p. 410; 800 w; 20c.

Nelson, W. A.—*Lignite and Lignitic Clay in West Tennessee.*—Resources of Tenn., Apr.,1912; p. 157-160*; 35c.

Pearce, F. I.—*Indiana Coal Industry in* 1911.—Coal Age, Jan.6,1912, p. 407; 500 w; 20c.

Peltier, M. F.—*Mining Methods in Illinois;* [Peabody Coal Co., No. 3 mine, Marion].—Coal Age, March16,1912, p. 732; 2000 w*; 25c.

Phillips, Wm. B.—*Coal and Lignite in Texas in* 1911.—Coal Age, Jan.6,1912, p. 414; 500 w; 20c.

Snider, L. C.—*Review of Mining in the U. S. in* 1911; *Oklahoma.*—Mining & Engg. World, Jan.27,1912; p. 231; 3600 w; 25c.

Stamm, L. E.—*Coal Industry in Iowa in* 1911.—Coal Age, Jan.6,1912, p. 407; 1000 w; 20c.

Tupper, C. A.—*Mining of Shallow Deposits with Steam Shovels;* [Missionfield, Ill., coal mines].—Mining & Engg. World, Jan.13,1912; p. 59; 1500 w*; 10c.

Udden, J. A.—*Geology and Mineral Resources of the Peoria Quadrangle, Illinois.*—U. S. Geol. Surv., Bull. 506; 1912; 101 pp.*; 10c.

State Mining Board.—*Thirtieth Annual Coal Report of Illinois;* [For year ended June30,1911].—Springfield, 1912; 445 pp.; 50c.

———. *Coal Production of Kansas, Maryland, and North Dakota,* 1911.—Coal Age, Jan.6,1912, p. 408; 1000 w; 20c.

———. *Coal Production in Illinois by Companies for the Year Ending June* 30, 1911; [From 30th annual coal report of State Mining Board of Ill.].—Coal Trade Bull., Feb.15,1912; p. 35-40; tables; 25c.

———. *Maple Block Coal Co., Des Moines, Iowa;* [Mine and power plant; single motor haulage system].—Electr. Mng., April,1912; p. 29-42*; 20c.

———. *The Illinois Coal Industry in* 1911.—Coal Age, Jan.6,1912, p. 406; 1500 w; 20c.

ROCKY MOUNTAIN STATES

Bell.—*13th Annual Idaho Report.*—See under Idaho.

Calvert, W. H.—*Utah Coal Fields; A Magnificent Source of Natural Wealth.*—Salt Lake Mng. Review, Apr.30,1912; p. 29; 1800 w*; 25c.

Chance, H. M.—*The Cambria Coal Field in Wyoming;* [Historical data].—Coal Age, Apr.13,1912; p. 884; 1300 w; 20c.

Dalrymple, J.—*The Colorado Coal Industry in* 1911.—Coal Age, Jan.6,1912, p. 405; 500 w; 20c.

Daniels, Jos.—*The Roslyn, Washington, Coal Field.*—Coal Age, May25,1912; p. 1064; June 8, p. 1130; 4900 w*; 30c.

Jamison.—*Wyoming,* 1911.—See Wyoming.

Malloy, W. G.—*Tanum Coal Co.;* [Discusses lands in Roslyn field, Washington].—Black Diamond, May25,1912; p. 22, p. 32; 500 w; 30c.

McDermott, J. B.—*Montana Coal Industry in* 1911.—Coal Age, Jan.6,1912, p. 408; 1500 w; 20c.
31 pp.; 25c.

Parks, H. M.—*The Economic Geological Resources of Oregon.*—Bur. Mines, Bull., Ser. 5, No. 2; 1912; 115 pp*; 50c.

Pierce, R. A.—*The Lignite Fields of Colorado.*—Coal Age, Feb.3,1912; p. 534; 2500 w*; 20c.

Pettit, J. E.—*Utah Statistics for* 1911; [Coal production].—Coal Age, Jan.6,1912, p. 414; 500 w; 20c.

Reagan, A. B.—*Mineral Resources of Jemez-Albuquerque Region, N. Mex.*—Mining & Engg. World, Jan.6,1912, p. 23; 1000 w; 10c.

Reagan, A.—*Ft. Apache District.*—See Arizona.

Shubart, B.—*A Mammoth Seam in Colorado;* [North Park field, Jackson county].—Coal Age, May4,1912; p. 966; 1000 w*; 20c.

Shubart, B.—*The Consolidated Fuel Co. of Utah;* [Coal field south of Price].—Coal Age, Apr.27,1912; p. 944; 1500 w*; 20c.

Simmons, J.—*The Acme Co.'s Plant in Wyoming* [Sheridan].—Coal Age, May,11, 1912; p. 998; 3600 w*; 20c.

Simmons, J.—*The Sheridan, Wyo., Coal Field.*—Coal Age, Apr.13,1912; p. 866; Apr. 27, p. 932; 3600 w*; 30c.

Simmons, J.—*The Cambrian Coal Field in Wyoming.*—Coal Age, March23,1912; p. 766; 2800 w*; 20c.

Stone, R. W.—*Coal Near the Black Hills, Wyoming-S. Dak.*—U. S. Geol. Survey, Bull. 499; 66 pp*; 10c.

Weston, W.—*Conditions in the Yampa Coalfield of Colorado.*—Mining & Engg. World, Dec.16,1911, p. 1225; 1200 w*; 10c.

Whiteside, F. W.—*The Trinidad District in Colorado.*—Coal Age, Feb.24,1912; p. 632; March2, p. 664; 5500 w*; 30c.

———. *Big Areas in Jackson County Underlain with Coal.*—Oregon Mng. & Timber Jnl., Dec.,1911, p. 4; 500 w; 35c.

———. *Coalmont Fuel;* [Discusses first shipments from this Colorado field to Laramie, Wyo.].—The New Empire, Jan.,1912, p. 9; 500 w; 20c.

———. *Coal Land Development in Southern Utah.*—Coal Age, June8,1912; p. 1143; 600 w; 20c.

———. *Coal Mining Companies of Montana;* [Directory, with 1911 production].—Coal & Coke Op., Jan.18,1912, p. 44; 1000 w; 25c.

———. *Idaho,* 1911.—Mining & Engg. World, Jan.27,1912; p. 213; 1500 w; 10c.

———. *New Railroads for Eastern Utah Coal Field.*—Salt Lake Mng. Rev., March15, 1912; p. 16; 1000 w*; 25c.

———. *Washington State Coal Statistics;* [By companies, 1911].—Coal Age, Jan. 6,1912, p. 415; 500 w; tables; 20c.

LATIN AMERICA

Brady, A. C.—*Mexico,* 1911.—See Mexico.

Dunstan, G.—*Notas sobre la région carbonifera de Oyón;* [The coals and coalfields of Oyon, Cajatambo, Dept. of Ancachs, Peru].—Soc. Ingrs. Peru, Bol.; Sept.-Oct., 1911; p. 395-401; 5000 w; 45c.

Karg, F.—*Die Kohle Brasiliens und ihre industrielle Verwendbarkeit;* [The coals of Brazil and their possible utility].—Kohle & Erz, May6,1912; p. 466; 1600 w; 35c.

Knowles, H. G. and W. H. Robertson.—*Coal in Bolivia and Peru.*—U. S. Consul. Rep., Feb.10,1912; p. 629; 500 w; 20c.

Lukis, E. du B.—*The Quiruvilca Railroad;* [With notes on anthracite resources].—Peru To-day, Feb.,1912; p. 31; 21000 w*; 35c.

Schmidt, Otto.—*A Carboniferous Corner of Chile;* [Lebu coal fields].—Mine & Quarry, March,1912; p. 586; 1500 w*; 25c.

GREAT BRITAIN

Davies, Jos. and C. P. Hailey.—*The South Wales Coal Annual,* 1912.—Cardiff, 1912; pp. —; $2.50 (book).

Lamplugh, G. W., and others.—*The Eastern Extension of the Notts Coal Field;* [Abstract of memoir of Gt. Britain Geol. Survey].—Coll'y Guardn., March29,1912; p. 632; 1000 w*; 35c.

Board of Trade; Commercial & Statistical Dept.—*Statistical Abstract for the British Empire; Coal Industry;* [Production, imports, exports and consumption, 1911].—Iron & Coal Trades Rev., Apr.12,1912; p. 568; 1500 w; tables; 35c.

Home Office.—*Preliminary Coal Mining Statistics for* 1911; [British].—Sci. & Art of Mng., March16,1912; p. 369; 600 w; tables; 35c.

———. *British Coal Consumption.*—Iron & Coal Trades Rev., Jan.26,1912; p. 142; 1000 w; 30c.

———. *Great Britain's Coal Industry,* 1911.—Coal Age, Jan.6,1912, p. 422; 500 w; 20c.

———. *Maltby Main Colliery;* [near Doncaster, S. Yorkshire].—Iron & Coal Trades Rev., March15,1912; p. 403; 1500 w*; 30c.

———. *Some Advantages of England's New Coal Field* [Kent],—Black Diamond, May25,1912; p. 21; 1500 w*; 30c.

———. *The British Coalfields;* [Brief summary of districts, production, number of miners; map].—Coal Age, March9, 1912; p. 711; 200 w*; 20c.

———. *The East Kent Coalfield.*—Mng. World (London), Feb.10,1912; p. 163; 750 w*; 35c.

———. *Die Kohlenausfuhr Grossbritanniens im Jahr* 1911; [The coal export trade of Gt. Britain and Germany, 1911]. —Glückauf, Jan.27,1912; p. 146-149; 50c.

———. *Exports of Coal, Coke and Manufactured Fuel from the U. K.;* [By classes and countries annually, 1909-1911, incl.].—Coll'y Guardn., Jan.12,1912; p. 93; 1000 w; table; Jan.19, p. 137; 2000 w; 50c.

———. *Working Conditions in the Mines of England.*—Black Diamond, March30, 1912; p. 18; 2500 w*; 30c.

FRANCE-BELGIUM-HOLLAND

Cambier, R.—*L'extension méridionale du bassin houiller Belge;* [The southward extension of the Belgian coal basin].—Echo d. Mines, Feb.26,1912, p. 245; 1000 w; 35c. Reprint in Soc. Amicale d. Mineurs de Douai, Bull., March10, p. 150; 35c.

Delmer, Al.—*Statistique rétrospective des industries extractives et métallurgiques, période* 1901-1910; [Statistical review of Belgian mining and metallurgy, 1901-1910; coal and iron; siderurgy; zinc, lead, silver].—Annales d. Mines (Belgiq.), Vol. 17, No. 2; 1912; pp. 255-345; 95c.

Guermonprez, —. *La houille au Limbourg hollandais;* [Coalfields of Holland Limbourg].—Echo d. Mines, Jan.15,1912; p. 59; 400 w; 35c. Also in Phosphate, Jan. 15, p. 62; 400 w; 35c. Also in Rev. Indl. du Centre, Jan.27, p. 10; 400 w; 35c.

Klein, W. C.—*De Bruinkoolformatie in Limburg;* [The lignite formation in Limbourg; read to 13th general congress of Dutch naturalists at Groningen, 1911].—Groningen, 1912; 22 pp.; $1.

Leprince-Ringuet, A. F.—*Les progrès techniques et les tendances de l'exploitation du bassin houiller du Pas-de-Calais;* [Technical progress and tendencies in coal mining in the Pas-de-Calais basin, France].—Soc. de l'Ind. Minrl. St. Etienne, C-R., Sept., 1911; p. 503-506; 1600 w; 75c.

Lodin.—*Tectonique du bassin houiller du Nord et du Pas-de-Calais;* [Geologic structure of the Nord and Pas-de-Calais coal basin].—Soc. de l'Ind. Minrl. St. Etienne, C-R., Oct.,1911, p. 602; 1000 w; 50c.

Rybak, M.—*Bericht über eine Reise in den belgischen Kohlenrevieren;* [Excursion to the coal mining districts of Belgium; report on coal mining practice].—Berg- & Hüttenm. Jahrb. Leoben-Pribram, Vol. 59, No. 3, 1911; pp. 195-242*; No. 4, pp. 291-334*; $3.

Stuckmann, H. A. F.—*Development of the Campine Coal Field, Belgium;* [From Stahl & Eisen].—Iron & Coal Trades Rev., March29,1912; p. 492; 3000 w; 35c.

———. *Aus der französichen Kohlenindustrie;* [French coal and coke industry, production and imports in 1911].—Deu. Bergwerks Ztg., May14,1911; p. 1; 1000 w; 35c.

———. *Belgian Production, Imports and Exports of Coal, Coke and Briquets,* 1911.—Iron & Coal Trades Rev., Feb.16, 1912, p. 243: 750 w; tables; 30c.

———. *French Coal, Iron and Steel Production in* 1911].—Iron & Coal Trades Rev., Apr.12,1912; p. 575; 1000 w; tables; 35c.

———. *French Imports and Exports of Coal, Coke and Briquets in* 1911.—Iron & Coal Trades Rev., Feb.16,1912, p. 256; 500 w; 30c.

———. *L'année minière* 1911 *en Belgique;* [Review of coal mining in Belgium in 1911].—Echo d. Mines, Feb.15,1912, p. 201; 1200 w; 35c.

———. *Notre commerce extérieur de combustibles en* 1911; [Foreign coal trade of France in 1911; imports and exports by countries].—Echo d. Mines, Feb.5,1912; p. 149; 750 w; tables; 35c.

———. *Production houillère des départements du Centre, Gard, Hérault, Loire, Sud-Ouest, Bouches-du-Rhône, Dauphiné, Savoie, Ouest, Saône-et-Loire, Est;* [Production of coal, coke, lignite and briquets in France, 1910 and 1911, by companies].—Soc. de l'Ind. Minérale St. Etienne, C-R; Feb.,1912; pp. 78-87; 100 w; tables; $1. Also in Rev. Noire, March17,1912; pp. 127-128; tables; 35c. Also in Echo d. Mines, March7, p. 299; March11, p. 316; 40c.

——— *Production Houillère;* [Review of coal production in the Pas-de-Calais and Nord basins. France, 1911 and 1910; also coke and briquets].—Echo d. Mines, Feb.12, 1912; p. 180; 500 w; tables; 35c. Also in Rev. Noire, Feb.18, p. 79; 35c. Also in Soc. Amicale d. . . . Mineurs de Douai, Bull.; Feb.25, p. 102-111; 35c.

———. *Tableau des mines de houille en activité dans le royaume de Belgique,* 1 *Avril,* 1912; [Directory of active coal mines in Belgium. April1,1912].—Annales d. Mines, Vol. 17, No. 2; 1912; pp. 349-388; 95c.

———. *Visite aux mines de Bruay;* [Excursion of the Nord and Pas-de-Calais Mining Congress, 1911, to the Bruay coal mines. Nord.].—Soc. de l'Ind. Minrl. St Etienne, C-R., Oct.,1911, p. 586-598*; 75c.

GERMANY-AUSTRIA

Baak, B.—*Jahrbuch der Deutschen Braunkohlen-, Steinkohlen- und Kali-Industrie* 1912; [Directory of the lignite, coal and potash mines and affiliated works of

Germany; 1912].—Halle; 1912; 246 pp.*; $2 (book.

Bärtling, R.—*Zur Tektonik des Hohenpeissenberges;* [Structure of the Hohenpeissen Mountains coal field, Bavaria].—Zts. f. prakt. Geol., March,1912; pp. 97-112*; 75c.

Bartonec, F.—*Das Krakauer Kohlenbassin;* [The Cracow coal basin, Austria].—Oestr. Zts. f. Berg- & H-wesen, Jan.6,1912; p. 1; 4000 w; 45c.

Blasberg, Eug.—*Die Steinkohlenversorgung Bayerns;* [The supplying of the coal needs of Bavaria].—Diessen, Munich, 1911; pp. 99; (book). Review in Deu. Bergwerks Ztg., Suppl. No. 5, Nov.18,1911, p. 2; 1000 w.

Bonikowsky, Dr.—*Die Oberschlesische Montanindustrie;* [The mining industry of Upper Silesia; coal, iron, zinc].—Technik & Wirtschaft, Oct. and Nov., 1911; pp. —; 75c. Also in Oberschlesisch. Berg- & Hm. Ver., Zts.; Jan.,1912; p. 11-20; 7500 w; 45c.

Fischer, R.—*Der Braunkohlenbergbau im Borna Revier;* [The lignite mining industry in the Borna district, Germany].—Leipzig Inaug. Dissert., 1911; 137 pp; $1.50 (Thesis).

Frech, Fritz.—*Deutschlands Steinkohlenfelder und Steinkohlenvorräte;* [Germany's coal fields and visible coal supplies].—Stuttgart, 1912; pp. —; 7 maps; 18 figs.; $5; (book).

Gutmann, H.—*Bericht über das Braunkohlenbergwerk zu Ladanje bei Vinica in Kroatien;* [The lignite mines at Ladanje near Vinica, Croatia].—Ungar. Montan-Ind. Ztg., No. 23, 1911; p. 5-7; 75c.

Hahn, O. H.—*Coal Situation in Germany,* 1911.—Coal Age, Jan.20,1912, p. 483; 800 w*; 20c.

Janus, —. *Das linksniederrheinische Steinkohlengebeit;* [The left Lower Rhine coal field; read to Deu. Markscheider Ver., Essen, 1911].—Mittlngn. aus Markscheidw., 1912, No. 1, pp. 11-17*; $1.50.

Jüngst.—*Mine Production Rhine-Westphalia District,* 1911.—See under Miscellaneous.

Jüngst, E.—*Die Betriebserweiterung im Rheinisch-westfälischen Steinkohlenbergbau;* [Progressive development of output of the Rhine-Westphalia coal fields].—Glückauf, Dec.23,1911, p. 1996-2001*; 50c.

Kerksieck, —. *Die Ausbildung des Leitflözes Finefrau in der Wittener und in der Bochumer Hauptmulde;* [Geological structure of the Finefrau seam in the Witten and Bochum coal basins, Rhine].—Glückauf, Jan.13,1912; pp. 53-60*; 50c.

Köhne.—*Die geologischen Verhältnisse im rechtsrheinisch-westfälischen Steinkohlenbezirk;* [Geology of the Right Rhine-Westphalian coal field].—Mittlngn. aus Markscheidw., 1912, No. 2; pp. 93-103*; $1.50.

Lemberg, H.—*Jahrbuch der Steinkohlenzechen und Braunkohlengruben Westdeutschlands;* [18th Yearbook of the coal and lignite mines of West Germany; 1912].—Dortmund, 1912; pp. —; $1.50 (book).

Oberste-Brink, —. *Die Lagerungs- und Flözverhältnisse in der Wittener Hauptmulde Zwischen Heven und Stiepel;* [Stratigraphy and coal seams in the Witten basin between Heven and Stiepel, Germany].—Glückauf, March30,1912; pp. 511-518*; 50c.

Recktenwald, J.—*Die Schichtenreihen und Flözgruppen des Saarbrücker Steinkohlenbirges;* [Stratigraphy and coal seams of the Saar coal basin, Germany].—Berg- & Hüttenm. Rundschau, Feb.20,1912, p. 103; 4000 w; 35c.

Schumacher, F.—*Die Golderzlagerstätten und der Goldbergbau der Rudaer Zwölf-Apostel-Gewerkschaft zu Brád in Siebenbürgen;* [The gold ore deposits and lignites of the Ruda Zwölf-Apostel Co., Brad, Transylvania].—Berlin, 1912; 114 pp; 6 plates; 80 figs; $2 (book).

Abstract in Zts. f. prakt. Geol., Jan.-Feb.,1912; pp. 1-85*; 75c.

Sidenvall, K.—*Om Oberschlesiens geologi och malmbrytning;* [Geology and ore deposits of Upper Silesia; coal, lead-zinc].—Jernkontor. Annaler, Bihang; Dec.,1911; pp. 971-978*; 45c.

Stein, G.—*Die Entwickelung des Zwickauer und Lugau-Oelsnitzer Steinkohlenreviers in den letzten 30 Jahren;* [Evolution of the Zwickau and Oelsnitz coal fields, Silesia, in the last 30 years].—Stein- & Braunkohle, May15,1912; p. 117; 1200 w; 35c.

———. *Beitrag zur Genesis des böhmischen Braunkohlenflözes;* [Genesis of the lignite seams of Bohemia].—Braunkohle, March1,1912; p. 762-764*; 50c.

———. *Bergbau im Königreich Sachsen im Jahre* 1910; [Coal, lignite and briquet production in Saxony in 1910].—Stein- u. Braunkohle, Dec.15,1911, p. 330; 1000 w; tables; 35c.

———. *Deutschlands Braunkohlenwirtschaft* 1909 *und* 1910; [Statistics of lignite and lignite-briquet industries in Germany in 1909 and 1910].—Bergwirtsch. Mittlngn., Jan.-Feb.,1912; p. 12-15; 2000 w; tables; 75c.

———. *Die Entwickelung der niederrheinisch-westfälischen Steinkohlenzechen im 3 Vierteljahr,* 1911; [Development of coal mining industry in the Rhine-Westphalian district in the first 3 quarters, 1911].—Glückauf, Dec.9,1911, p. 1920-1923; 50c.

———. *Die Gewinnung der Bergwerke, Salinen und Hütten im deutschen Reich und im Luxemburg im Jahre,* 1911; [Statistics of production of mines, salines and smelters in Germany and Luxemburg, 1911].—Glückauf, May4,1912; pp. 717-721; tables; 50c.

———. *Der Kohlenbergbau im Jahre* 1911; [Germany production, imports and exports of coal, lignite, coke and briquets].—Bergbau, March21,1912; p. 162; 1000 w; table; 35c.

———. *German Coal and Iron and Steel Trades in* 1911.—Iron & Coal Trades Rev., Jan.5,1912; p. 6; 2000 w; 35c.

———. *German Coal, Lignite, Coke and Briquet Production, Imports and Exports,* 1911.—Iron & Coal Trades Rev., Feb.9, 1912; p. 212; 500 w; 30c.

———. *Gewinnung von Mineralkohlen nebst Briketts und Koks;* [Statistics of production, import and export of coal, lignite, coke and briquets in Austria, 1911 and 1910].—Zentral Verbd. Bergbau Betriebsl. Oestr., Zts.; Feb.15,1912; p. 112; 500 w; tables; 45c. Also in Montanist. Rundschau, Feb.16,1912; p. 164; 500 w; tables; 45c.

———. *Kohlengewinnung und Aussenhandel Deutschlands im Jahre* 1911; [Coal production, imports and exports of Germany; statistics for 1911 and previous years].—Glückauf, Feb.10,1912; p. 229-234; tables; 50c.

———. *Polster's Jahrbuch und Kalendar* 1912; *Kohle, Koks, Brikette, Heizmaterialen;* [Polster's Yearbook and Manual for 1912; Guide to the trade, manufacture and consumption of coal, coke, briquets and

other fuels].—Leipzig, 1912; pp. —; $1.50 (book).

———. *Production des mines non syndiquées dans le bassin de la Ruhr;* [Coal output of non-syndicate companies in the Ruhr district, 1910-1911].—Rev. Noire, March17,1912; p. 127; table; 35c.

———. *Progrès techniques de l'exploitation houillère en Westphalia;* [Progress in Westphalian coal-mining industry; haulage and hoisting; drainage; ventilation; coking and gas-producers, low-grade fuels; etc. From Comité d. Houilléres, Circulaire].—Echo d. Mines, Apr.18,1912; p. 469; 1500 w; 35c.

———. *Statistik der oberschlesischen Berg- und Hüttenwerke für* 1911; [Statistics of mining and metallurgy in Upper Silesia in 1911; with list of more important collieries, and data thereon].—Oberschles. Berg- & Hüttenm. Ver., Zts; Feb.,1912; pp. 62-75; tables; 45c.

Coal Statistics; also in Kohleninteressent, May15, p. 113-114; tables; 35c.

———. *Steinkohlenförderung der nichtsyndizierten Zechen,* 1903-1911; [Coal output, by mines, of the non-syndicate collieries in the Niederrhein-Westphalia district, 1903-1911].—Deu. Bergwerks Ztg., May18,1912; p. 1; tables; 35c.

———. *The Production of Coal in Germany in* 1911.—Mining & Engg. World, March16,1912; p. 598; 100 w; tables; 10c.

———. *The Rhenish-Westphalian Coal Syndicate in* 1911; [Reviews production].—Iron & Coal Trades Rev., May3,1912; p. 688; 1500 w; 35c.

———. *Uebersicht über die Ergebnisse des Stein- und Braunkohlenbergbaus in Preussen für die ersten* 3 *Vierteljahre* 1911; [Comparative summary of output and labor employed in Prussian coal and lignite mining, 1st 3 quarters of 1911 and 1910].—Zts. f. d. Berg-, H-, & Salinenwesen, Vol. 59, No. 5; 1911; pp. 196-197; tables; $1.15.

———. *Vorläufige Uebersichten über die Ergebnisse des Stein- und Braunkohlenbergbaus in Preussen für das Jahr,* 1911; [Preliminary statistics of coal and lignite mining in Prussia, 1911].—Zts. f. d. Berg-, H-, & Salinenw., Vol. 60, No. 1, 1912; p. 46-48; $1.50. Also in Glückauf, March2, p. 364; tables; 50c.

REST OF EUROPE

de Hautpick, E.—*Russia in* 1911.—See under Russia-in-Asia (under Asia).

Flegel.—*Mining in Servia.*—See Copper.

Holtedahl, O.—*Zur Kenntnis der Karbonablagerungen des westlichen Spitzbergen, I.* [Description of the coal deposits of western Spitzbergen].—Christiania, 1911; pp. —; $1.50; (pamphlet).

Hutchins.—*Russian Empire in* 1911.—See under Asia (Russia-in-Asia).

Odriozola, A.—*Santander District, Spain.*—See under Zinc.

Tombelaine, A.—*Géologie et hydrologie du bassin de la Réunion, à Villaneuva Minas, Séville, Espagne;* [Geology and hydrology of Reunion coal basin, Seville, Spain].—Soc. de l'Ind. Minérale, Bull; Feb.,1912; pp. 185-220*; $1.

———. *Coal Mining Industry of Poland.*—Mining & Engg. World, May4,1912; p. 950; 250 w; 10c.

———. *Die Braunkohlenvorkommen in Toskana;* [Lignites of Tuscany, Italy].—Stein- u. Braunkohle, Dec.15,1911, p. 332; 750 w; 35c.

———. *Die Montanindustrie in Russland;* [Mining in Russia; Rostow consular district, Don river; coal fields and Kuban oilfields].—Montan Ztg., Jan.1,1912, p. 3; 2000 w; 35c.

———. *Extent of Italy's Coal Trade.*—Mining & Engg. World, Dec.30,1911, p. 1326; 400 w; 10c.

———. *Kohlenindustrie in Spitzbergen;* [The coal fields of Spitzbergen].—Kohleninteressent, Apr.15,1912; p. 90; 1000 w; 35c.

———. *Russlands Kohlenproduktion* 1910; [Statistics of Russian coal production 1910].—Riga Industrie Ztg., March15,1912; p. 76; 500 w; 35c.

AFRICA

Brown, J. F. K.—*Coal Mining in the Transvaal;* [Read to Scottish Fed. Inst. of Mng. Students; abstract].—Iron & Coal Trades Rev., Jan.5,1912; p. 13; 3000 w; 30c.

Also in German in Zentral Verbd. Bergbau Betriebsl. Oestr., Zts., Feb.15, p. 101-106; 45c.

Gascoyne, R.—*Review of Mining in Foreign Countries in* 1911; *South Africa.*—Mining & Engg. World, Jan.27,1912; p. 270; 7000 w; 25c.

Marriott.—*Rhodesia,* 1911.—See Rhodesia.

Marriott.—*Transvaal,* 1911.—See Transvaal.

Rogers, A. W.—*Coal Problem in the Karroo;* [Fissure-vein deposits of coal in Nieuweveld region; abstract from report of Cape Geol. Commission].—S. Afr. Mng. Jnl., March16,1912; p. 51; 1500 w; 35c.

Rhodesia Chamber of Mines.—*Tables of Monthly Output.*—See under Rhodesia.

Steart, F. A.—*The Klip River Coalfield, Natal;* [From report of Inspector of Mines f. 1910].—S. Afr. Engg., Jan.,1912; p. 1; 1200 w*; 35c.

Swinburne, U. P.—*Natal Mining Development;* [Review of official report for 1910].—S. Afr. Mng. Jnl., Dec.23,1911, p. 569; 2200 w; 50c.

Yerby, W. J.—*Coal Deposits of Southern Nigeria.*—U. S. Consul. Rep., Feb.1,1912, p. 511; 300 w; 20c.

Cheml., Met. & Mng. Soc. of S. Afr.—*Visit to Coalbrook Colliery.*—C. M. & M. Soc., Jnl; March,1912; p. 372; 1600 w*; 90c. Also in S. Afr. Engg., May, p. 77; 1500 w*; 35c.

———. *Coal Mining in Natal;* [Review of official report for 1910].—S. Afr. Engg., Dec.,1911, p. 101; 1400 w; 35c.

———. *Coal Mines of the Transvaal; 1: Witbank Colliery.*—S. Afr. Mng. Jnl., Feb.24,1912; p. 893; 1600 w*; 35c.

———. *Equipment of the Apex Colliery;* [Rietfontein].—S. Afr. Mng. Jnl., Feb.3,1912; p. 797; 1600 w*; 35c.

———. *Les lignites de Tunisie;* [The lignites of Tunis; from Tunisie Minière].—Echo d. Mines, Dec.4,1911, p. 1245; 1000 w; 35c.

———. *The Coal Deposits at Udi, S. Nigeria.*—S. Afr. Engg., Jan.,1912; p. 11; 500 w; 35c.

———. *The Mineral Output of the Transvaal in* 1911.—Mining & Engg. World, Apr. 6,1912; p. 768; 1500 w; 10c.

———. *The South African Coal Output;* [Monthly by companies, Feb.,1911-1912].—S. Africa, March16,1912; p. 580; 1000 w; table; 35c.

———. *The Vereeniging Estates Col-*

lieries.—S. Afr. Engg., Feb.29,1912; p. 23; 1000 w*; 35c.

ASIA

Adams, G. F.—*Deep Mining in India;* [Outlook for coal mining industry; presidential address Mng. & Geol. Inst. of India; abstract].—Coll'y Guardn., March1,1912; p. 434; 1500 w; 30c.

Adams, G. I. and W. E. Pratt.—*Geologic Reconnaissance of Southern Luzon.*—Philipp. Jnl. of Sci., Dec.,1911; pp. 449-482*; 65c.

Anderson, G. E.—*Iron and Coal Production in China.*—U. S. Consul Rep., Feb.2, 1912; p. 521; 500 w; 20c. Reprint in Mining & Engg. World, Apr.6, p. 771; 10c.

Anderson, Geo. E.—*Philippines Shows Healthy Growth in Coal Output;* [from U. S. Consul Rep.].—Mining & Engg. World, Dec.16,1911, p. 1224; 500 w; 10c.

Bain, H. F.—*Japan's Mineral Production.*—M. & S. P., Jan.6,1912, p. 52; 2500 w*; 35c. Abstract on coal industry in Coal Age. March16, p. 740; 1200 w*; 20c. Also in Black Diamond, March23, p. 18; 3000 w*; 30c.

Caldwell, Geo. V.—*Experiences on a Chinese Coal Field;* [Practice in Lai Heu Ho field, northern Shansi; read to Manchester Geol. & Mng. Soc.; abstract].—Iron & Coal Trades Rev., May17,1912; p. 806; May24, p. 847; 3300 w*; 50c. Also in Coll'y Guardn., May24, p. 1031; 3500 w; 30c. Also in Mng. Engg., June, p. 74; 2000 w; 35c.

Dodson, W. D. B.—*China and Chinese Engineering.*—See China.

Kern, Dr.—*Die rechtlichen und wirtschaftlichen Verhältnisse im Steinkohlengebeit von Heraklea in Kleinasien;* [Coal mining in the Heraclea district, Asia Minor; its legal, technical and industrial aspects].—Berg- & Hüttenm. Rundschau, May5,1912; p. 163; 5500 w; 35c.

Knabenshue, S. S.—*Chinese Coal for United States;* [Kaiping Basin, Tientsin, developments].—Mines & Minerals, Apr., 1912; p. 537; 2000 w; 35c. Also in Coal Trade Bull., May1, p. 47; 2000 w; 25c.

Knox.—*Formosa.*—See under Japan.

Lozé, Ed.—*Les charbons de l'Orient;* [The coal resources and production of the Orient and Australasia].—Comité Centrale d. Houill., Circulaire No. 4329; 1911.
Abstract in Rev. Indl. du. Centre, Dec. 16, 1911, p. 10; 750 w; 35c.

McMurtrie, S.—*Underground Methods in Indian Mining.*—Mng. & Geol. Inst. of India, Trans; Jan.,1912; pp. 257-295*; $2.50.

Nishio, K.—*The Mining Industry of Japan;* [Historical development of laws and mining practice; tables of annual production 1874-1908].—Amer. Inst. Mng. Engrs., Bull. 61, Jan.,1912, pp. 103-147*; $1.15.

Raymond, R. W.—*The Excursion to Hawaii and Japan;* [Includes notes on various Japanese collieries].—Amer. Inst. Mng. Engrs., Bull 61, Jan.,1912, pp. 1-102*; $1.15.

Read, T. T.—*The Mineral Production and Resources of China;* [Extracts on coal and iron, from paper read to Amer. Inst. Mng. Engrs., Oct.,1911].—Iron & Coal Trades Rev., May10,1912; p. 760; 7500 w*; 45c. Also (coal only) in Coll'y Guardn., May10, p. 933; 4500 w*; 35c. Also in Coal Age, Apr.20, p. 910; 3000 w*; 20c.

Rosedale, I.—*Coal Supply for the Railways of India;* [Indian collieries].—Cassier's Mag., Jan.,1912, p. 72; 750 w; 35c.

Scrivenor, J. B.—*Rantau Panjang Coal Measures, Selangor;* [Brief abstract of report of F. M. S. Geol. Survey].—Imperial Inst., Bull., April,1912; p. 171; 250 w; 75c.

Smith, W. D.—*The Coal Resources of the Philippine Islands.*—Mineral Resources of Philippines, 1911, p. 37-56*; 65c.
Abstract in Iron & Coal Trades Rev., Jan.5,1912; p. 9; 1500 w; 30c.

Swensen, K. P.—*The Lanchow Mines in China.*—Coal Age, June1,1912; p. 1098; 4000 w*; 20c.

Wang, Cho-Yang and Cheng-Fu.—*Notes on the Han-Yeh-Ping Iron & Coal Co., China.*—Columbia School of Mines Quar'ly, Jan.,1912; p. 165; 1000 w*; 65c.
Reprint in Iron & Coal Trades Rev., March8, p. 375; 30c.

Woolley, M.—*Coal Situation in the Philippines.*—Coal Age, May18,1912; p. 1054; 1400 w; 20c.

———. *Coal Mining in Turkey.*—Mining & Engg. World, Dec.30,1911, p. 1316; 400 w; 10c.

———. *Der Bergbau in China;* [Coal mining industry in Chili and North China region].—Montan. Ztg., March15,1912; p. 106; April1, p. 122; 5000 w; 50c.

———. *Japanese Coal Mines in Manchuria.*—U. S. Consul. Rep., Feb.26,1912; p. 832; 200 w; 20c.

———. *Le Tonkin minier;* [Mining industry in Tonkin, French Indo-China, in 1910; abstract of governor's report].—Echo d. Mines, Apr.1,1912; p. 408; 2400 w; 35c. Also in Soc. Amicale d. Mineurs de Douai, Bull., Apr.10,1912; p. 222; Apr.25, p. 228; 2400 w; 35c.

———. *Primorsk Prospects, Siberia.*—Mng. Jnl., Feb.3,1912; p. 111; 1200 w; 35c.

———. *The Coal Industry of India.*—Coll'y Guardn., Apr.12,1912; p. 732; 1800 w; 35c.

———. *Ueber die transkaukasische Kohlenindustrie;* [Notes on the Nachschiro-Tkwibul coalfield, Kutais, Transcaucasia].—Riga. Industrie Ztg., Apr.15,1912; p. 108; 600 w; 35c.

AUSTRALASIA

Ball, L. C.—*Coal on the Oakey-Cooyar Railway.*—Queensland Govt. Mng. Jnl., April,1912; p. 158; 1200 w*; 35c.

Cowper, H. A.—*West Australian Coal Industry; A Collie Mining Property;* [Collie plateau].—Australian Mng. Standd., Jan. 4,1912; p. 5; 2500 w; 35c.

Jackson, C. F. V.—*Mount Mulligan Coal;* [Report of Queensland state mining engineer].—Qu. Govt. Mng. Jnl., Jan.,1912; p. 7; 5000 w; 35c. Abstract in Australian Mng. Standd., Jan.25, p. 76; 1800 w; 35c.

MacDonald, A. R.—*Queensland,* 1911.—See under Australia (Queensland).

Mance.—*Australasia,* 1911.—See Australia.

Pittmann.—*New South Wales,* 1911.—See Tin.

Reed, F.—*Coal Mining in New Zealand in* 1910; [Abstract of official report].—Coll'y Guardn., Jan.26,1912; p. 177; 1500 w; 30c.

———. *Abermain No. 2 Colliery, West Maitland, N. S. W.*—Australian Mng. Standd., March7,1912; p. 214; 1200 w; 35c.

———. *Coal Mining in New Zealand;* [Abstract of official reports for 1910].—Sci. & Art of Mng., Apr.27,1912; p. 437; 500 w; 35c.

———. *New Zealand Mining;* [Abstract of official report for 1910; coal, gold].—

Mng. Jnl., Apr.6,1912; p. 321; 1600 w; 35c. Also in Indian & Eastn. Engr., Apr.1, p. 121; 1000 w; table; 35c.

———. *The Australian Oversea Coal Trade;* [Exports and imports by countries annually, 1906 to 1910, incl.].—Coll'y Guardn., Jan.12,1912; p. 91; 1000 w; tables; 30c.

GEOLOGY AND GENESIS

Chance, H. M.—*Geology in Coal Mining.*—Coal Age, Dec.23,1911, p. 353; 1800 w; 20c.

Donath, Ed.—*Was ist Steinkohle?* [What is coal? Its distinction from lignite].—Montainst. Rundschau, Jan.16,1912; p. 53; 3800 w; 45c.

Engler, C.—*Die Bildung von Kohle und Erdöle;* [The formation of coal and oil and the energies contained therein].—Organ d. Bohrtechniker, Dec.1,1911, p. 280; 1600 w; 45c.

Gény, P.—*Etude sur la distribution des teneurs en matières volatiles dans les veines de la concession de Courrières;* [Distribution of the volatile content of coal in various parts of the Courrières mines, Montigny; from Soc. Geol. du Nord, Annales, 1911, No. 2].—Rev. Noire, Aug.20,1911, p. 312; 1500 w*; 35c. Also in Soc. Amicale d .. . Mineurs de Douai, Bull.; Dec.25,1911; p. 816; 1500 w; 35c.

Glöckner, —. *Zur Entstehung der Braunkohlenlagerstätten der südlichen Lausitz;* [Geology and genesis of the lignite deposits of south Lausitz].—Braunkohle, Jan.19, pp. 661-668; Jan.26, pp. 677-685*; Feb.2, pp. 693-703*; Feb.9, pp. 709-712; $1.

Hall, R. D.—*Determinants of Coal Thickness;* [Thickness of a coal seam in folds, rolls and under pressure].—Coal Age, Feb. 10,1912; p. 566; 2200 w*; 20c.

Heys, W.—*Anthracite and its Origin;* [in South Wales, France and U. S.].—Sci. & Art of Mng., May11,1912; p. 478; 1100 w; 35c.

Hyde, J. E.—*Occurrence of Coal Which Bears Evidence of Unusual Conditions Accompanying its Deposition;* [Erosion of coal before deposition of cap sandstone, at B. & O. R. R. cut, Somerset, Ohio].—Jnl. of Geol'y, May-June,1912; p. 316; 5500 w*; 65c.

Potonié, —. *Die Tropen Sumpfflachmoor-Natur der Moore des produktiven Karbons;* [The tropical marsh character of the bogs of the productive Coal Measures].—Kgl. Preuss. Geol. L-A., Jahrb., Vol. 30, Part 1, Heft 3; pp. 389-443*.

Raefler, F.—*Die Entstehung der Braunkohlenlager zwischen Altenburg und Weissenfels;* [Geology and genesis of the lignite beds between Altenburg and Weissenfels].—Jena Inaug. Dissert., 1911; 58 pp; $1 (thesis).

Reprinted in issues of Braunkohle in March, April, May and June, 1912.

Sim, J.—*The Geology of Coal;* [Theories of origin; read to Scottish Federated Inst. of Mng. Students, Western branch].—Iron & Coal Trades Rev., March8,1912; p. 365; 5200 w; 30c.

Simpson, C.—*Causes of Washouts or Barren Areas in Coal Seams.*—Sci. & Art of Mng., Jan.20,1912, p. 279; 500 w; 35c.

———. *Modern Views on the Constitution of Coal.*—Coll'y Guardn., Dec.15,1911. p. 1191; 1500 w; 35c.

METHODS AND DETAILS OF PRACTICAL MINING

For Supports, Haulage & Hoisting, Coal Cutters, Accidents, Safety and Rescue, etc., see Chapters 8 and 9.

Aston, F. J.—*Under What Physical Condition is the Long-Wall System of Working Coal Most Suitable?*—Sci. & Art of Mng., Apr.27,1912; p. 455; 700 w*; 35c.

Bunting, D.—*Chamber Pillars in Anthracite Mines.*—Amer. Inst. Mng. Engrs., Bull. 57, Sept.,1911, p. 739; 3000 w; tables; $1.15.

Reprinted in E. & M. J., July 1, p. 26; 3000 w; 25c. Also in Black Diamond, Sept. 9, p. 11; 3000 w*; 30c. Also in Coll'y Guardn., Nov.3, p. 867; 1400 w*; 30c. Also in Coal Trade Bull., Jan.15,1912, p. 53; 3000 w; 25c.

Chadwick, F. D.—*Longwall Mining in Illinois.*—Mines & Minerals, March,1912, p. 451; 1600 w*; 35c.

Fohl, Wm. C.—*Engineering Requirements in Bituminous Coal Mining;* [Read to Engrs. Soc. of W. Penn.; abstract].—Coal Trade Bull., Feb.1,1912; p. 47; 3200 w; 25c.

Griffith, Wm., and E. T. Conner.—*Mining Conditions under the City of Scranton, Pa.*—U. S. Bur. Mines, Bull. 25; 1912; 89 pp.; atlas of plates; 20c.

Gullachsen, B. C.—*The Working of the Thick Coal Seams in Upper Silesia;* [Read to N. of Engl. Inst. of Mng. & Mechl. Engrs., 1911; abstract].—Iron & Coal Trades Rev., Oct.20,1911; p. 658; 3500 w*; 35c. Also in Mng. Engg., Dec., p. 258; 3500 w*; 35c. Also in Coal Age, Apr.6,1912; p. 845; 1500 w*; 20c.

Hepplewhite, W. H.—*The Action and Control of Differently Constituted Coal-Bed Roofs;* [Read to Midland Counties Instn. of Engrs.].—Iron & Coal Trades Rev., Dec.15,1911, p. 970; March8,1912, p. 372; 8000 w; 50c. Also in Coll'y Guardn., Dec.22, p. 1247; March8, p. 481; 7500 w; 50c. Also in Coal Age, March23,1912, p. 779, 1200 w; 20c.

Heym, W.—*Die Arbeitserteilung in Gruben bitumenhaltiger Kohle;* [Labor problems and labor classification in the bituminous coal mining industry].—Kali Erz & Kohle, Jan.25,1912; p. 87; 1800 w; 35c.

Kerr, G. L.—*Elementary Coal Mining.*—London, 1912 (3d edition); pp. —*; (book).

Lettsome, A. R.—*Working Longwall in the Coal Mines of Illinois;* [Discusses modifications required by state ventilation laws].—Black Diamond, Feb.10,1912; p. 19; 1000 w*; 30c.

Lynde, F.—*Pillar Drawing in Contiguous Seams.*—Coal Age, Jan.27,1912, p. 510; 1000 w*; 20c.

Niess, Dr.—*Tagebau- und Tiefbaubetrieb beim Braunkohlenbergbau;* [Methods in surface and underground lignite mining].—Halle, 1911, pp. —; (book).

Peel, Rob.—*An Elementary Text-Book of Coal Mining.*—London, 1911 (15th edition); 386 pp*; $1.50 (book).

Powell, J. W., and C. F. Sherman.—*Thick Vertical Seam;* [Methods of working 16 ft. coal bed].—Coal Age, May25,1912; p. 1085; 400 w; 20c.

Reynolds, S.—*Longwall and Conservation;* [Advantages over room-and-pillar mining].—Coal Age, Jan.20,1912, p. 475; 1600 w; 20c.

Scholtze, G.—*Abbau steilgelagerter wenig mächtiger und schlagwetterreicher Steinkohlenflöze;* [Methods of working thin and gaseous steeply inclined coal seams].—Kohle u. Erz, Jan.1,1912; 750 w; 35c.

Scholz, C.—*Cost of Yardage Decides the*

Question of Economy of Panel System of Long-Wall Mining.—Black Diamond, Jan. 20,1912, p. 16; 750 w*; 30c.

BREAKERS AND TIPPLES

Cole, E. L.—*The New Buck Mountain Breaker;* [of Lehigh Valley Coal Co., Mahanoy City, Pa.].—Coal Age, May18,1912; p. 1032; May25, p. 1067; 5000 w*; 30c. Also described in Mines & Minerals, June, 1912; p. 637; 3600 w*; 35c.

Griffith, W. T.—*Double Tipple for Colonial Coal Co.;* [Prestonsburg, Ky.].—Coal Age; Apr.20,1912; p. 906; 1500 w*; 20c.

Walker, M. A.—*Taylor Breaker near Scranton, Penn.*—Coal Age, Dec.23,1911, p. 334; 1200 w*; 20c.

Weldin, Wm. A.—*Modern Steel Tipple at Annabelle Mines,* [Marion county, W. Va.]. —Mines & Minerals, Jan.,1912, p. 325; 4500 w*; 35c.

Rybak, M.—*Bericht über eine Reise in den belgischen Kohlenrevieren;* [Excursion to the coal mining districts of Belgium; mining and coal-dressing practice].—Berg- & Hüttenm, Jahrb, Leoben-Pribram, Vol. 59, No. 3, 1911; pp. 195-242*; No. 4, pp. 291-334*; $3.

Schroth, K.—*Aufbereitung und Kohlensorter beim oberschlesischen Steinkohlenbergbau;* [Development of coal dressing and sorting in Upper Silesia].—Kohle & Erz, Apr.1,1912; p. 314; 3500 w; 35c.

Seltner, Wm.—*Die neue Kohlenaufbereitungsanlage in Trifail;* [The new coal dressing plant at Trifail, Austria].—Oestr. Ingr. & Archt. Ver., Zts.; March15,1912; p. 170; 500 w; 35c.

———. *An Anthracite Plant, Hazleton, Penn.;* [Describes Audenried breaker].—Coal Age, Dec.16,1911, p. 310; 1000 w*; 25c.

———. *Product of Three Openings Handled by One Tipple;* [Greene car haulage system at Burnside breaker of Phila. & Reading Coal & Iron Co.].—Black Diamond, Feb.10,1912; p. 15; 2100 w*; 30c.

SIZING; SCREENING; WASHING

Bement, A.—*The Screening Problem in Illinois.*—Coal Age, June1,1912; p. 1105; 1000 w*; 20c.

Delameter, G. R.—*Standards in Coal Washings.*—Coal Age, June1,1912; p. 1115; 1300 w; 20c. Also discussed in Mines & Minerals, June, 1912, p. 660; 1200 w; 35c.

Delamater, G. R.—*Standardization in Coal Washing.*—Mines & Minerals, March, 1912; p. 461; June, p. 660; 6000 w*; 65c.

Eschenbruch, —. *Neuere Fortschritte auf dem Gebiete der Kohlenaufbereitung;* [Innovations in coal dressing in Prussia].—Zts. f. d. Berg-, H-, & Salinenw., Vol. 60, No. 1, 1912; pp. 28*; $1.50.

Garcia, J. A.—*Fireproof Coal Washery, Panama, Illinois.*—Coal Age, May4,1912; p. 964; 1600 w*; 20c.

Godeau, G.—*Le triage de terres du puits No. 7 des charbonnages de Bascoup;* [Screening plant at Bascoup colliery, Belgium].—Asso. d. Ingrs. Mons. Publ; Vol. 5, 1911; No. 3; pp. 345-350*; 75c.

Henry, R. A.—*Appareil pour le tracé des courbes caracteristiques de lavabilité des charbons;* [Apparatus for tracing the characteristic curves of the capacity of any coal for washing].—Rev. Univ. d. Mines, 1911, No. 2, pp. 68*; 90c. Summary in Rev. de Métal'gie, Oct.,1911, pp. 804-808*.

Brief English abstract in Coal Age, Jan. 20,1912, p. 474; 800 w*; 20c.

Heys, W.—*The Baum-System Coal-Washing Machine.*—Sci. & Art of Mng., Apr.27, 1912; p. 452; 1100 w*; 35c.

Möhrle, Th.—*Neues in der Schlammaufbereitung;* [Newer developments in the handling, pressing and treatment of coal slimes and their utilization].—Kohle & Erz, Jan.15,1912; p. 52; Jan.22, p. —; 2000 w*; 50c.

Porter, J. B.—*Experimental Coal-Washing Plant at McGill University.*—Coll'y Guardn., May17,1912; p. 983; 2500 w*; 35c.

Verbouwe, —. *Installation pour l'aspiration et la récupération des poussières du triage au puits Le Fief;* [Sturtevant aspirator for recovering coal dust about screens and sorting plants; installation at Le Fief colliery, Belgium].—Annales d. Mines (Belgiq.), Vol. 17, No. 2, 1912; p. 401; 1200 w*; 95c.

Wethers, Geo. J.—*Coal Washing;* [Notes on *Delamater's paper* .—Mines & Minerals, Apr.,1912; p. 536; 750 w; 35c.

S. T. A.—*Standards in Coal Washing.*—Coal Age, May25,1912; p. 1085; 1000 w; 20c.

———. *A New System of Screening and Loading Coal;* [Horizontal balanced slow-speed screens, picking conveyor and pulsating lower jig].—Iron & Coal Trades Rev., Dec.8,1911, p. 921; 2000 w*; 30c.

———. *Coal Washing at Lahausage, Alabama.*—Mines & Minerals, Feb.,1912; p. 391; 750 w; 35c.

———. *Consolidated Coal Washery at Saginaw, Mich.*—Mines & Minerals, March, 1912, p. 468; 1000 w*; 35c.

———. *Die moderne Aufbereitung von Kohle und Erzen;* [Recent progress in washing and dressing of coal and ores].—Riga. Industrie Ztg., Dec.31,1912; p. 371; 1600 w; 35c.

———. *Lavoir à charbon de la Compagnie de Fives-Lille;* [The coal washing plant of the Fives-Lilles Co., France].—Rev. Noire, Feb.18,1912; p. 82; 600 w*; 35c.

———. *Luhrig Screening Plant and Coal Washery at Binley Colliery;* [Warwickshire].—Coll'y Guardn., Apr.17.1912; p. 22; 750 w*; 35c.

———. *Peckfield Colliery;* [of Micklefield Coal & Lime Co., Ltd.; new screening plant].—Iron & Coal Trades Rev., March1, 1912, p. 321; 1000 w*; 30c.

USE OF LOW GRADE COALS

See also Gas-Producers; also Briquetting; also Electricity from Coal Mines."

Bütow and Dobbelstein. — *Ausnutzung minderwertiger Brennstoffe auf Zechen des Oberbergamtsbezirks Dortmund, XIII;* [Utilization of refuse coal and low-grade fuels in Dortmund collieries. Part 13; Tests of gas-producers, II].—Glückauf, Jan.6, 1912; pp. 1-15*; 50c.

Meyer, H.—*Die Rheinische Braunkohlenindustrie und ihre wirtschaftliche Bedeutung;* [The Rhenish lignite-mining industry and its industrial significance].—Bonn Inaug. Dissert., 1911; 166 pp.; $1.50 (thesis).

Formanti.—*Industrial Wastes* [in Italian].—See under Waste Disposition.

Hart-Davis, H. V.—*A Dust-Fuel Boiler and Its Uses;* [Read to Manchester Geol. & Mng. Soc.; abstract].—Coll'y Guardn., Feb.16,1912; p. 326; 3000 w*; 30c. Also in Iron & Coal Trades Rev., Feb.23, p. 298; 3500 w*; 30c. Also in Sci. & Art of Mng., March30, p. 385; 600 w; 35c.

Jzart, S.—*Versuch einer ökonomischen*

Kesselheizung mit der drehbaren Feuerung System Savary mit Kohlengrus und Staub; [Economy test of boiler-firing using slack and coal dust with the rotary Savary grate].—Kohle & Erz, March25, 1912; p. 293; 500 w*; 35c.

Leese. J. S.—*Firing Soft Coal Screenings;* [Use in large cotton mill].—Mechl. World, Apr.5,1912; p. 160; 1200 w*; 35c.

Mourgeon, L.—*Sur l'emploi des combustibles ligneuses humides;* [Use of damp lignite as fuel].—Asso. d. Chimistes de Sucrerie France, Bull., Vol. 2, 1911; p. 48-52; $1.

Mowat, J. F.—*Burning Screenings;* [Economy tests with balanced draft].—Power, May7,1912; p. 656; 1000 w; 15c.

Meuskens, Cl.—*Kontinuierlich arbeitende Generatoren zur Vergasung minderwertiger Brennstoffe;* [Continuous producers for gasification of low-grade and waste coals, ecke breeze, etc.].—Techn. Blätter, May25, 1912; p. 162; Junel, p. 171; 2500 w*; 50c.

Shutt, W. F.—*Utilization of Low Grade Fuel;* [Texas crushed-bone lignites in gas-producers].—Coal Age, May4,1912; p. 979; 750 w; 20c.

———. *Ueber die Verwendung roher lignitischer Braunkohle zur Darstellung von Generatorgas;* [The use of woody lignitic coals in gas-producers, especially the Westerwald, Germany, low-grade lignites].—Stein- & Braunkohle, Apr.15,1912; p. 93; May1, p. 103; 3600 w; 50c.

BRIQUETTING

See also Chapter 13.

Althouse, W. D.—[*New Binder-Briquetting System for Thin-Bedded Coals, at Phoenix, Md., and Elsewhere*].—Black Diamond, Apr.6,1912; p. 18, p. 21; 1200 w*; 30c.

Heym, W. — *Antrazitstaub Briketts;* [Briketting of anthracite dusts].—Kali Erz & Kohle, May15,1912; p. 483; 1600 w; 35c.

Lovejoy, J. F.—*Advantages of Anthracite Briquettes as Fuel.*—Retail Coalman, Feb., 1912, p. 66; 2500 w; 35c.

Müller-Herrings, —. *Die Entwickelung des Schulzschen Röhrentrockenapparates auf den Braunkohlenbrikettfabriken des niederrheinischen Braunkohlenbezirks;* [Development of the Schulz tubular drying system in the lignite-briquetting works of the Lower Rhine district].—Braunkohle, March 15,1912; p. 792-795; 50c.

Phillips, W. H.—*Manufacture of Patent Fuel and Utility of Low-Grade Coals;* [Discussion].—Mng. & Geol. Inst. of India, Trans; Vol. VI, Part 4, Jan.,1912; pp. 187-195; $2.50.

Pratt, W. E.—*On Briquetting Philippine Coals.*—Mineral Resources of Philipp. I'ds, 1911; p. 79; 1000 w; 65c.

Reuss, —. *Die Beleuchtung der Braunkohlenbrikettfabriken;* [Illumination of lignite briquetting works].—Zts. f. d. Berg-, H-, & Salinenwesen, Vol. 59, No. 5; 1911; p. 714-725*; $1.15.

Venator, —. *Versuche und Beobachtungen aus dem Gebiete der Briketterzeugung;* [Some technical notes and experiments in the field of coal briquetting].—Jahrb. Berg- etc., Sachsen, 1911, pp. 90-112*; $3.00.

Wright, C. L.—*Briquetting Tests at the U. S. Fuel Testing Plant, Norfolk, W. Va.*—U. S. Bureau of Mines, Bull. 30, 1911; 41 pp*; 10c.

———. *Briquettes for the French Navy;* [Specifications].—Iron & Coal Trades Rev., Dec.8,1911, p. 923; 1000 w*; 30c.

———. *Die Brikettfabrik in Dzieditz;* [The coal briquetting works at Dzieditz, Austria].—Montanist. Rundschau, March1, 1912; p. 224; 1500 w; 45c.

———. *Eine neue Brikettpresse;* [New Ehrhardt-Sehmer briquetting press].—Braunkohle, Feb.9,1912, p. 713-716*; 45c.

———. *The Leeds Briquette Works;* [Describes Yeadon binding process].—Iron & Coal Trades Rev., Jan.12,1912; p. 52; 500 w*; 30c.

———. *Versuche und Verbesserungen beim Bergwerksbetriebe,* 1911; [Innovations and improvements in Prussian mining in 1911; coal dressing and briquetting].—Zts. f. d. Berg-, H-, & Salinenw., Vol. 60, No. 1; 1912; pp. 130-134*; $1.50.

ELECTRICITY FROM COAL MINES

Ackley, C. S.—*Electric Power from Anthracite Waste;* [Lehigh and Harwood plants in Pennsylvania].—E. & M. J., Dec. 23,1911, p. 1213; 400 w; 25c.

Geipel, W.—*Electricity Direct from the Coal Mine;* [Advocates burning at base of up-cast shaft].—El. Rev. (London), Apr.26, 1912; p. 669; 400 w; 35c.

Hunter, J. V.—*Central Station Generation of Power at Mining Centers;* [Costs of shipping electricity instead of coal].—Amer. Inst. Electr. Engrs., Proc.; Dec., 1911, pp. 2493-2501*; March,1912; pp. 277-282; $2.15.

Leprince-Ringuet, F.—*Rapport de Mission en Angleterre et en Allemagne sur la distribution de l'enérgie dans les régions houillères;* [Report of the French commission on the generation and distribution of power in the coal fields of England and Germany].—Annales d. Mines(Paris), Oct., 1911; 112 pp*; $1.

Abstract in Italian in Rassegna Mineraria, Apr.11,1912; p. 110; Apr.21, p. 229; 3000 w; 50c.

Leprince-Ringuet, F.—*Sur la production, la distribution et l'emploi d'électricité par les charbonnages;* [The production, distribution and uses of electricity by coal mines, chiefly in France, England and Germany].—Paris,1912; 136 pp.; 49 figs.; $2.50; (book).

Pitaval, R.—*Les mines qui vendent du courant électrique;* [The coal mines of France which generate and ship electric power instead of coal; from "Echo d. Mines"].—Soc. Amicale d. . . Mineurs de Douai, Bull.; Jan.10,1912; p. 14; 1800 w; 35c.

———. *Immense Power Plant Projected in Lehigh Valley;* [Proposed Hauto plant, hydro-electric with coal auxiliary at mine mouth.—Mining & Engg. World, Jan.20, 1912; p. 115; 400 w; 10c. Also in Coal & Coke Op., May16,1912; p. 307; 1000 w; 25c. Also in E. & M. J., May 18, p. 992; 800 w; 25c. Also in E. & M. J., May18, p. 992; 800 w; 25c. Also in Coal Age, June29, p. 1248; 800 w; 20c. Also in Power, July23, p. 113; 800 w; 15c.

TRANSPORT; HANDLING

See also "Transportation, Handling," in last chapter.

Loomans, D. J.—*The Coal Elevator;* [Elevator-conveyor at Waupun, Wis.].—Retail Coalman, May,1912; p. 53; 1200 w*; 35c.

Paquet, F.—*Le nouveau terril central du charbonnage de Sacré Madame;* [Tunnels for conveying refuse to central dump pile at the Sacré Madame colliery].—Asso. d. Ingrs. Mons, Publ; Vol. 5, No. 3; 1911; p. 258*; $1.

Hyde, M. D.—*Railroad Track Layout for Soft-Coal Mines.*—Coal Age, Jan.20,1912, p. 472; 2000 w*; 20c.

Ridsdale, H. H.—*Coal Face Conveyors;* [Reviews principles and various types of conveyors; read to S. Staff. & Warwicks. Inst. of Mng. Engrs.; abstract].—Iron & Coal Trades Rev., Dec.22,1911, p. 1012; 3500 w; 30c. Also in Coll'y Guardn., Dec. 29, p. 1286; 6000 w*; 30c.

Ryerson, W. N. and J. B. Crane.—*Notes on the Use of Alternating Current in Unloading Coal;* [Describes piers and cranes at Duluth-Superior Harbor, Minnesota].—Amer. Inst. Electr. Engrs., Proc.; March, 1912; pp. 231-244*; $1.15.

Abstract and editorial discussion in Electrician, May3,1912; p. 136; p. 144; 5000 w*; 35c. Also abstracted in Iron Age, May 16, p. 1222; 750 w; 30c.

"Traveler."—*Superimposed Bins to Save Pocket Room.*—Black Diamond, Dec.23, 1911, p. 17; 2000 w*; 25c.

"Traveler."—*A Strong Pocket Built According to a New Idea.*—Black Diamond, Jan.6,1912, p. 18; 2000 w*; 30c.

———. *A 600-Ton Coal Bin and Tower;* [Storage at gas-producer plant of Republic Iron & Steel Co., Haselton, O.].—Engg. Record, Apr.20,1912; p. 428; 1000 w*; 20c.

———. *Anthracite Coal Freights;* [From editorial discussion in "Scranton Times"].—Coal Age, Apr.27,1912; p. 946; 2000 w; tables; 20c.

———. *Coal Loading Booms at Annabelle Mine;* [Train loading at Worthington, W. Va., to prevent breaking].—Coal Age, May4,1912; p. 967; 750 w; 20c.

———. *Coal Shipping Plant;* [Hancock anti-breaking chute and coal loading device for vessels].—Iron & Coal Trades Rev., Jan. 5,1912; p. 8; 1000 w*; 30c.

———. *Koksbunker aus Eisenbeton;* [Coal and coke pocket made of re-inforced concrete; Borsig machine works, Berlin].—Ton-Industrie Ztg., March23,1912; p. 518; 300 w*; 25c.

———. *New Type of Steel Barge for the Coal Trade.*—Coal & Coke Op., Dec.28,1911, p. 427; 750 w*; 25c.

———. *Norfolk & Western R. R. Coal Handling Plant;* [Dock plans at Hampton Roads, Va.].—Iron Age, June13,1912; p. 1462; 750 w; 30c.

SPONTANEOUS COMBUSTION; STORAGE

Bement, A.—*Loss in Coal Due to Storage.*—Amer. Inst. Chemi. Engrs., Trans., Vol. III; pp. 281-286.

Godeau, G.—*Combustion spontanée et mise en stock des charbons;* [Spontaneous combustion and the storing of coal].—Asso. d. Ingrs. Mons, Publ., Vol. 5, 1911; No. 3, p. 350; 75c.

Harman, E. A.—*Action of British Coals under Storage;* [Read to Manchester Distr. Instn. of Gas Engrs.].—Coal & Coke Op., Jan.11,1912, p. 22; 1800 w; 25c. Also in Mng. Engg., Dec.,1911, p. 256; 2000 w; 35c.

Heidepriem, —. *Liegen Erfahrungen der Versuchsresultate über Konservierung von Kohlen unter Wasser vor?* [Are their reliable test data on the subaqueous storage of coal?].—Zts. f. Dampfkessel Betr., Feb. 2,1912; p. 49-53*; 75c.

Heym, W.—*Die Aufspeicherung von Anthrazitkohle;* [Storing of anthracite coal].—Kali Kohle & Erz, March15,1912; p. 267; 3000 w; 35c.

Heym, W.—*Die plötzliche Entzündung von Kohlen;* [Spontaneous combustion of coal; causes and preventives].—Kali Erz & Kohle, Feb.25,1912; p. 195; 1500 w; 35c.

Porter, H. C. and F. K. Ovitz.—*Deterioration and Spontaneous Heating of Coal in Storage; a Preliminary Report.*—U. S. Bur. Mines, Technical Paper No. 16; 1912; 14 pp.; 10c. Reprint in Coal Trade Bull., June15,1912; p. 34; 4500 w; 25c.

Porter, H. C. and F. K. Ovitz.—*Deterioration and Spontaneous Heating of Coal in Storage;* [Read to Amer. Chemi. Soc.; abstract].—Engg. Record, Dec.23,1911, p. 747; 3200 w; 25c. Also in M. & S. P., Dec.23, p 806; 2500 w; 20c. Also in Power, Jan.2, 1912, p. 6; 2200 w; 15c. Also in Coal & Coke Op., Jan.4, p. 1; 2600 w; 25c. Also in Jnl. of Indl. & Engg. Chem'y, Jan., p. 5; 3000 w; 65c. Also in Engg. News, Jan. 11, p. 64; p. 81; 2000 w; 35c. Also in Mines & Minerals, March, p. 475; 1600 w; 35c. Also in Cassier's Mag., July, p. 54; 4000 w; 35c.

Redmayne, R. A. S.—*Spontaneous Combustion in Coal Mines;* [From report on Jamage explosion].—Iron & Coal Trades Rev., May3,1912; p. 684; 2000 w; 35c.

Schorrig.—*Die Selbstentzündlichkeit der Kohle;* [Spontaneous combustion of coal; newer theories].—Deu. Bergwerks Ztg. Suppl. No. 2, Oct.21,1911, p. 1; 3000 w; 35c. Also in Zts. f. Dampfkessel Betrieb., Jan.5, 1912; p. 1-3; 75c. Also in Zentral Verbd. Bergbau Betriebsl. Oestr; Zts.; Apr.1,1912; p. 196; 1800 w; 45c. Also in Kohle & Erz, May6, p. 454; 1600 w; 35c.

Virgin, J.—*Spontaneous Combustion.*—Coal Age, Apr.27,1912; p. 952; 1000 w; 20c.

———. *Die Selbstentzündung der Kohle;* [Spontaneous combustion of coals; abstract from Zts. f. Dampfkessel-, etc., Betrieb, 1912, No. 1, pp. 1-3].—Ton-Industrie Ztg., Jan.18,1912; p. 99; 750 w; 25c.

———. *Lagerung der Kohlen in Stapeln;* [Deterioration of coal in exposed storage piles].—Kohle & Erz, March25,1911; p. 290; 1000 w; 35c.

———. *Submerged Coal Storage Pit at Omaha, Nebr.*—Engg. Record, June15,1912; p. 648; 1200 w*; 25c.

PURCHASING, BASES OF

Brown, Myles.—*Modern Practice in Fuel Contracts.*—Wigan, Engl.; 1912; pp. —; (book).

Brown, Myles.—*Specifications in Fuel Contracts.*—Sci. & Art of Mng., Feb.3,1912; p. 296; 500 w; 35c.

Cosgro, J. P.—*A Proposed Basis for Coal Purchase.*—Power, March12,1912; p. 358; 1500 w; 15c.

Crecelius, L. P.—*The Purchase of Bituminous Coal under B. T. U. Specifications;* [Read to Amer. Electr. Ry. Engg. Asso.; abstract].—Electrician, Jan.5,1912, p. 503; 600 w; 35c.

Hitt, J. E., and G. Warner.—*Inspection of Fuel from the Viewpoint of the Producer and Consumer.*—Internatnl. Ry. Fuel Asso., Proc; May,1912; 6 pp; $1.

Hutton, F R. and J. L. Pultz.—*The Systematic Purchase of Coal;* [for N. Y. City departments].—Power, Feb.27,1912; p. 285; 2800 w; 15c.

Quickel, R. D.—*Purchase of Locomotive Fuel Coal;* [Abstract; read to Kentucky Mng. Inst.].—Coal Age. Dec.23.1911, p. 50; 750 w; 20c. Also in Mines & Minerals, Feb.,1912; p. 398; 2000 w; 35c.

Rzehulka, A.—*Verkauf der Kohlen nach*

Heizwert, Aschen- und Wassergehalt; [Coal purchase on calorific value and ash and water content].—Stein- & Braunkohle, Feb. 1,1912; p. 27; 1000 w; 35c.

———. *Ueber die technischen und wirtschaftlichen Gesichtspunkte, nach denen man Braunkohlen und Brikette für industrielle Feuerungen zu bewerten hat;* [Technical bases for valuation of lignite and briquets for industrial furnaces].—Oestr. Ton-Industrie Ztg., 1911, No. 19; pp. 315-316; 50c.

———. *Zur Frage der Kohlen-Heizwertgarantie;* [Calorific-guarantee question in coal purchasing; discussion before Central Asso. of Coal Dealers of Germany].—Kohle & Erz, Jan.29,1912; p. 110; 1200 w; 35c.

ANALYSIS AND TESTING

See also Chemistry and Assaying in Chapter 11.

Archibald, E. H. and J. N. Lawrence.—*The Determination of Small Amounts of Moisture in Coals.*—Jnl. of Ind'l & Engg. Chem'y, April,1912; p. 258; 2500 w*; 65c.

Crisfield, J. A. P.—*Determination of Moisture in Fuel;* [Abstract from Franklin Inst., Jnl.].—Coal Age, Jan.13,1912, p. 443; 1700 w; 20c. Also in Mining & Engg. World, Jan.13, p. 70; 1000 w*; 10c.

Denis, T. C., E. Stansfield and J. B. Porter.—*Collecting Coal Samples, and Sampling in the Testing Plant and Laboratory.*—Canada Dept. Mines, Mines Branch Report No. 83; 1912; pp. 129-162*; $1.25.

Donath, Ed. and Fr. Bräunlich.—*Zur Kenntnis der Kohlen und Verkohlungsrückstände;* [Chemical tests to distinguish the various varieties of coals and coaly residues].—Chemiken Ztg., Apr.4,1912; p. 373; 3500 w; table; 30c.

Ferla, A.—*Nouvel appareil pour l'analyse de tous charbons ou combustibles au point de vue de leurs sous-produits;* [New apparatus for analyzing coals or fuels with respect to their recoverable by-products].—Rev. Polytechniq., 1911, No. 288, pp. 154-158*; 75c.

Frankforter, G. B. and A. P. Peterson.—*The Volatile Constituents of Lignite;* [From Amer. Cheml. Soc., Jnl.].—Cheml. Engr., Jan.,1912, p. 4; 3000 w*; 35c.

Gill, A. H.—*Gas and Fuel Analysis for Engineers.*—New York, 1911 (6th edition; 139 pp*; $1.25 (book).

Kessler, K.—*Ueber Heizwertbestimmungen;* [Tests on the determination of calorific value of coals].—Ver. Deu. Ingr., Thüringia section; Mittlngn; No. 10, 1911; pp. 97-100*; 75c.

Kowalke, O. L.—*Notes on the Calculation of Heating Value of Coals from their Analyses.*—Wisconsin Engr., Dec.,1911, p. 137; 1000 w*; 30c. Abstract in "Power," Apr.16,1912; p. 558; 1000 w; 20c.

Lessing, R.—*A New Apparatus for the Coking Test of Coals.*—Soc. of Chem'l Ind'y, May31,1912; pp. 465-468*; 65c.

Lomax, J.—*The Microscopical Examination of Coal and Its Use in Determining the Inflammable Constituents Present Therein.*—Instn. of Mng. Engrs., Trans., Vol. 42, No. 1; pp. 2-15*; $5.

Reply to discussion before the Institution; in Coll'y Guardn., Apr.19,1912; p. 787; 4000 w; 35c. Also in Iron & Coal Trades Rev., Apr.19, p. 602; 3800 w; 35c.

Moss, R. S., and E. G. Bailey.—*Trenches Preferred in Sampling Coal.*—Black Diamond, Jan.13,1912, p. 21; 1200 w; 30c.

Parr, S. W.—*The Causes for Variation in Volatile Matter Determinations.*—Cheml. Engr., May,1912; p. 212; 2000 w; 35c.

Stansfield, Edg.—*Coals of Canada,* by J. B. Porter and others; *Part 8, Work of the Chemical Laboratory;* [Sampling, analytic methods, and analyses of Canadian coals].—Canada Dept. Mines, Mines Branch Report No. 83; 1912; Vol. 2; pp. 121-184*; tables; $1.25.

Stanton, F. M. and A. C. Fieldner.—*Methods of Analyzing Coal and Coke.*—U. S. Bur. Mines, Technical Paper No. 8; 1912; 21 pp*; 10c.

Abstract in Mng. Sci., March28, p. 289; April4, p. 309; 4000 w; 25c. Also in Cheml. Engr., April, p. 150; 6000 w*; 35c. Also in Mining & Engg. World, May25, p. 1101; 3600 w; 10c.

Stromeyer, C. E.—*Coal Sampling;* [From report of chief engineer of Manchester Steam Users' Asso.].—Coll'y Guardn., Dec. 8,1911; p. 1125; 1800 w; 30c. Also in Australian Mng. Standd., March21,1912; p. 261; 1500 w; 35c.

Stuckenberg, W. D.—*How to Take a Sample of Coal from a Bunker.*—Black Diamond, Dec.30,1911, p. 20; 1500 w*; 30c.

———. *The Technical Analysis of Fuel* [Coal].—Cheml. Engg., Jan.,1912; p. 392; Feb.; p. —; 5000 w; 75c.

COMBUSTION

Austin, K.—*The Combustion of Coal;* [Read to S. Afr. Inst. of Engrs.; abstract].—S. Afr. Mng. Jnl., Jan.20,1912; p. 714; Jan.27, p. 757; 3000 w; 50c.

Baldwin, A. T.—*Importance of the High Test of CO^2 in Boiler Flue Gases and Automatic Analysis, and Record of Same.*—Asso. of Engg. Soc's; Jnl.; March,1912; 134-149*; 40c.

Griffiths, J. L.—*Smoke Abatement and Fuel Economy;* [International convention, London, 1912; discusses exhibits and Ramsay's plan for burning coal in the mine].—U. S. Consul. Rep., May15,1912; p. 609; 3500 w; 20c.

Uehling, E. A.—*The Carbon Dioxide Recorder as a Factor in Fuel Economy.*—Jnl. of Ind'l & Engg. Chemy, Feb.,1912; p. 123; 2000 w*; 65c.

White, D.—*The Effect of Oxygen in Coal;* [Reprint of U. S. Geol. Surv. Bull. 382].—U. S. Bur. of Mines, Bull. 29, 1911; 80 pp*; 10c.

Williams, A. D.—*Fuel Economy and CO_2 Recorders.*—Power, Jan.23,1912, p. 109; 1600 w; 15c.

———. *Der Kohlenverbrauch und die klimatischen Verhältnisse in den Städten;* [Coal consumption and meteorology in towns; discusses Bolton's experiments in N. Y. on temperature increase and decreased rainfall].—Oestr. Wochenschr. f. öffentl. Baudienst, 1912, No. 1, pp. 14-15; 1000 w; 75c.

———. *Efficiency in Fuel Combustion;* [Discusses economic waste of coal in this field].—El. Rev., Dec.29,1911, p. 1063; 1000 w; 35c.

———. *Making a Big Saving by Analyzing the Ash;* [Improved firing methods based upon ash analysis at Louisville Lighting Co. plant].—Black Diamond, Apr.27, 1912; p. 18; 1800 w*; 30c.

BOILER TESTS; USES OF COAL

Bolton, R. P.—*Fuels; A Discussion of Their Uses and Abuses;* [Presidential address, Amer. Soc. of Heatg. & Ventilatg.

Engrs.]—Iron Trade Rev., Feb.8,1912; p. 346; 2500 w; 20c.

Breckenridge, L. P., H. Kreisinger and W. T. Ray.—*Steaming Tests of Coals and Related Investigations.* 1904-1908.—U. S. Bureau of Mines, Bull. No. 23, 1912; 380 pp*; 10c.

Brislee, F. J.—*An Introduction to the Study of Fuel* [and technical application].—London, 1912; pp. 258; 61 figs.; $2.50; (book).

Buell, D. C.—*Proper Method of Firing Locomotives.*—Internatnl. Ry. Fuel Asso., Proc.; May,1912; 29 pp*; $1.

Clark, S. M.—*The Fuel Cost in Making Steam;* [Guides in the selection of coal and fuel economy].—Practl. Engr., May15, 1912; p. 507; 1800 w; 25c.

Durley, R. J.—*Coals of Canada,* by J. B. Porter and others; *Part 7, Boiler Tests; Part 8, Gas Producer Tests.*—Canada Dept. Mines, Mines Branch Report No. 83; 1912; Vol. 2; pp. 3-120*; $1.25.

Lloyd, T. S.—*The Use of Anthracite Coal for Locomotive Fuel;* [History, advantages and disadvantages].—Internatnl. Ry. Fuel Asso., Proc., May,1912; 18 pp*; $1.

Mills, S. J. A.—*Economics in Coal for Steam Production.*—Mechl. World, May10, 1912; p. 219; May17, p. 232; 2500 w*; 35c.

Porter, J. B., and others.—*An Investigation of the Coals of Canada, with Reference to their Economic Qualities; as Conducted at McGill University under the Authority of the Dominion Government.*—Canada Dept. Mines, Mines Branch; 6 volumes. Volume 1, 1912; Report No. 83; pp. 233; charts, plates; $1.25; Vol. 2, pp. 189; $1.25.

Thimm.—*Die Beseitigung der Kesselasche in Braunkohlenwerken durch den Mammutbagger;* [Handling boiler ashes in lignite plants by means of power shovels].—Braunkohle, May3,1912; pp. 65-67*; 50c.

White, A. H., P. Barker and H. M. Wilson.—*Coals Available for the Manufacture of Illuminating Gas;* [Tests of coals from Wyo., Mich., Colo., Ill., Tenn., Penn., Ky., N. Mex., Ala., W. Va.].—U. S. Bureau of Mines, Bull. 6, 1911; 77 pp.*; 10c.

———. *Crushing Coal for Boiler Use.*—Mines & Minerals, Jan.,1912, p. 349; 750 w*; 35c.

CONSERVATION; ESTIMATES OF VISIBLE SUPPLIES

Frech, Fr.—*Deutschlands Steinkohlenfelder und Steinkohlenvorräte;* [Coal fields and estimated visible coal supplies of Germany].—Stuttgart; 1912; 165 pp; 25 figs; $5 (book).

Discussion and comment by Speiser (in German) in Stein- & Braunkohle, May15, p. 119; 1000 w; 35c.

Abstract in English in Engrng., Apr.5, p. 462; 3000 w; 30c.

Watts, W. W.—*Presidential Address, Geological Society of London, Feb.* 16, 1912; [Conservation and duration of British coal supply].—Coll'y Guardn., Feb.23, 1912; p. 379; p. 387; 2000 w; 30c.

British Science Guild.—*Natural Sources of Energy.*—See under Power, etc.

Holmes, J. A.—*Carbon Wastes;* [Conservation in mining and use of coal].—Jnl. of Indl. & Engg. Chem'y, March,1912, p. 161; 4000 w; 65c.

Kreuzkam, Dr.—*Die "schwarze Sorge";* [The "black peril"; estimated supplies and future consumption of coal in Gt. Britain].—Kali Erz & Kohle, March5,1912; p. 233; March15, p. 269; 3000 w; 50c.

Meachem, I.—*The Loss of Mineral Areas in South Staffordshire;* [Coal losses in pillars, supports, flooded workings, etc.; read to S. Staff. & Warwicks. Inst. of Mng. Engrs.].—Coll'y Guardn., Feb.23,1912; p. 377; July26, p. 176; 4800 w; 50c. Iron & Coal Trades Rev., Feb.23; p. 289; July26, p. 126; 4800 w; 50c. Also in Sci. & Art of Mng., March2, p. 347; 1200 w; 35c.

GOVERNMENT COAL MINES

See also "Government Ownership" in last chapter.

Broome, G. H.—*History of Victorian State Coal Mines.*—In F. D. Power's "Coalfields and Collieries of Australia," pp. 374-383*.

Clark, C. M.—*The State Coal Mine, Wonthaggi, Victoria, Australia;* [From the "I. C. S. Student"].—Coll'y Guardn., Apr.26, 1912; p. 833; 1500 w; 35c.

Hasslacher, A.—*Das Industriegebiet an der Saar;* [Industrial review of the Saar River region, including Prussian state collieries].—Saarbrücken, 1911; 171 pp.; (book).

Jüngst, E.—*Der Bergarbeiterausstand im Ruhrrevier und die Verstaatlichung des Kohlenbergbaues;* [The Ruhr coal coal strike and the problem of nationalization of coal mines].—Deu. Bergwerks Ztg., March 22,1912; p. 1; 1000 w; 35c.

Rowe, H. E.—*The State Coal Mine;* [Discusses alleged failure of Victoria state coal mine to meet expectations].—Vict. Chamber of Mines, Jnl.; Feb.,1912; p. 120; 4500 w; 65c.

Rowe, H. E.—*The State Coal Mine and State Socialism;* [Discusses alleged failure in Victoria].—Vict. Chamber of Mines, Monthly Rep., Jan.31,1912, 2800 w; 75c.

———. [*Abstract of official report on Prussian state mines, their production and profits; fiscal year* 1910; in German].—Oberschles. Berg- & Hüttenm. Ver., Zts.; March,1912; p. 111-125; 35c.

———. *Government-Owned Coal Mines in Alaska;* [Opposes proposition].—Mining & Engg. World, Jan.20,1912; p. 103; 2000 w; 10c.

———. *Nationalization of Mines;* [Economics of coal mining and profits, especially in German state mines].—Coll'y Guardn., Feb.9,1912, p. 287; 3000 w; 30c.

———. *New South Wales State Coal Mine;* [Abstract of speech before Legislative Assembly favoring proposed measure].—Australian Mng. Standd., March7,1912; p. 209; 800 w; 35c.

LEGISLATION AFFECTING COAL MINING

See also "Law; Legislation; Taxation" in last chapter. For workmen's compensation see under "Labor." For explosives in coal mining, see under "Explosives and Blasting."

Calvert, W. H.—*How Uncle Sam Classifies His Coal Lands;* [Practice of U. S. Geol. Survey land classification board].—Salt Lake Mng. Rev., May15,1912; p. 14; 3600 w*; 25c.

Douglas, Jas.—*Some Reflections on the Disposal of Public Coal Lands;* [Coal mining at Dawson, N. Mex., as a guide to conservation policy].—Amer. Mng. Congr., 1911; Proc., Vol. XIV; pp. 214-226. Illustrated abstract in Black Diamond, Dec.16, p. 15; 3200 w*; 30c.

Fallières, A. (President of France).—*Nouveau Règlement Général sur l'Exploita-*

tion des Mines de Combustibles en France; [Text of new law governing coal mining in France].—Journal Officiel, Aug.26,1911; 18,000 w.

Reprint in Echo d. Mines, Aug.31, (Supplement); 18,000 w; 35c. Also in Soc. Amicale d... Mineurs de Douai, Bull., Sept. 25, pp. 514-622; Oct.10, p. 649—; Oct.25, p. 691—; 65c. Also in Rev. Noire; Sept.17, Oct. 1, Oct.15, Oct.29; 90c. Also in Soc. de l'Ind. Minrl. St. Etienne, Bull., Oct.,1911, pp. 367-410; 75c. Also in Annales d. Mines (Belgiq.), Vol. 16, No. 4, 1911; $1.00.

English abstract and editorial discussion in Coll'y Guardn., July26,1912; p. 173; p. 183; 5000 w; 35c.

Smith, Geo. O.—*What the West Needs in Coal Land Legislation;* [Outline of administration's policy].—Amer. Mng. Congr., 1911; Proc., Vol.14, pp. 285-290.

Abstract in Mng. & Engg. World, Nov.4, p. 902; 200 w; 10c. Also in Mng. & Engg. World, Nov.4, p. 902; 200 w; 10c. Also in Mng. Sci., Nov.9, p. 436; 2600 w; 20c. Also in M. & S. P., Nov.11, p. 612; 2400 w; 20c. Also in Coal Trade Bull., Nov.15, p. 29; 2500 w; 25c. Also in E. & M. J., Nov.25. p. 1049; 1600 w; 25c.

Tallis, J. F.—*Coal Mines Act,* 1911 [British].—Newport, Eng.; 1912; pp. — (book).

———. *Canadian Coal Mining Laws;* [Summary of all known operative laws and regulations, dominion and provincial].—Coll'y Guardn., Apr.26,1912; p. 835; 2000 w; 35c.

———. *Government Would Limit Profit on Western Coal;* [Proposed Dymond leasing system limiting profit to 50 cts. per ton].—Black Diamond, March9,1912, p. 20; 2000 w*; 30c.

———. *Reprint of Coal Mines Act,* 1911 [British; 1 & 2, Geo. 5, Ch. 50].—Sci. & Art of Mng., Suppl., Jan.20,1912, pp. xv; 35c.

STRIKES, PROFITS, WAGES

See also under "Labor" in Part III of Index.

Bell, Sir H.—*Profits and Wages in the Coal Trade;* [British].—Coll'y Guardn., March15,1912; p. 534; 3600 w; 30c.

Briggs, H.—*Profit and Safety in Mining;* [Presidential address, Scottish Federated Inst. of Mng. Students, Eastern Branch].—Iron & Coal Trades Rev., Feb.9,1912; p. 203; 4000 w*; 30c.

Cole, E. L.—*Anthracite Coal Strike Situation;* [Discusses conditions of organization and aims of anthracite workers].—Coal Age, Feb.17,1912; p. 601; 3000 w*; 20c.

Dinsmoor, A.—*The Run of Mine System in Illinois;* [Payment of workers by gross ton].—Coal Age, March9,1912; p. 705; 1200 w; 20c.

Purdue, A. H., and J. E. Finney.—*The Operation of the Mine-Run Law in Arkansas;* [Paying miners for slack and "mine run" coal].—Amer. Mng. Congr., 1911; Proc., Vol. XIV., pp. 227-240.

Richardson, T. and J. G. Walbank.—*Profits and Wages in the British Coal Trade, 1898 to 1910.*—Newcastle on Tyne; 1911; pp. —; 75c; (pamphlet).

Review in Coll'y Guardn., Jan.12,1912; p. 85; 2000 w; 30c.

Saliers, B. A.—*The Coal Miner;* [Studies wage regulation in Hocking Valley].—Bethlehem, Penn., 1912; pp. —; (pamphlet).

———. *Die Arbeitslöhne, die Kohlenpreise und der Reingewinn der Bergwerke im Oberbergamtsbezirk Dortmund;* [Statistics of wages, coal prices and net profit in the Dortmund district, Germany].—Bergbau, March14,1912; p. 149; 1000 w; table; 35c.

———. *Le regain de l'industrie houillère russe;* [Profits and costs in Russian coal mining].—Echo d. Mines, Apr.8,1912; p. 428; 1000 w; 35c.

———. *The Wages of Coal Miners in Germany.*—Iron & Coal Trades Rev., March 15,1912; p. 405; 500 w; 30c.

ECONOMICS OF COAL INDUSTRY

Babson, R. W.—*Bituminous Prices Go Down and Wages Go Up;* [Discusses trend of American and export coal industry].—Black Diamond, May18,1912; p. 20; 2500 w*; 30c.

Bain, H. F.—*Influence of the Panama Canal Upon the Coal Trade;* [Discusses coal resources of countries bordering on the Pacific and conditions of competition; read to Canadn. Mng. Inst.].—Coll'y Guardn., April 19,1912; p. 709; 3000 w*; 35c. Canadian Mng. Inst., Trans. Vol. 15, Pt. 1; 1912; pp. 58-72; $1.15.

Black Diamond Publ. Co.—*Yearbook,* 1912 *Edition;* [Directory of coal mines in U. S. and Canada; statistics, etc.].—Chicago, 1912; pp. —; $5 (book).

Brighthouse, H.—*The Price of Coal.*—London, 1912; pp. —; $1 (book).

Brown, M.—*Australian Coal in the Eastern Markets.*—Australian Mng. Standd., Nov.30,1911, p. 548; 1000 w; 35c. Abstract in Mining & Engg. World, Feb.24,1912, p. 450; 1000 w; 10c.

Garcia, J. A.—*A Remedy for Overproduction.*—Retail Coalman, March,1912; p. 57; 2500 w; 20c. Also in Coal Trade Bull., March15, p. 39; 2000 w; 25c.

Goldschmidt, C.—*Ueber die Konzentration im deutschen Kohlenbergbau;* [Centralization of control in the German coal mining industry].—Karlsruhe,1912; 130 pp; $1; (book).

Greenwell, A.—*International Coal Competition;* [Discusses factors controlling export coal trade of nations; read to Canadian Mng. Institute].—Coll'y Guardn., Apr.17, 1912; p. 31; 5000 w; tables; 35c. Also in Coal Trade Bull., June1, p. 49; 5000 w; 25c. Also in Canadian Mng. Inst., Jnl., Vol. 15, No. 1; 1912; pp. 38-52; $1.50.

Jeschke, H.—*Die Technik des Absatzes deutscher und Englischer Steinkohlen in Deutschland;* [Technical features of the sale of German vs. English coals in Germany].—Zts. f. Handelswissenschaft, Jan., 1912, pp. 333-339; 75c.

Keene, L.—*Economy in Mining Coal;* [Discusses economies of various equipments; read to Nanticoke District Mng. Inst.].—Coal & Coke Op., Jan.25,1912, p. 55; 1200 w; 25c.

Kuhn, D. W.—*Sherman Anti-Trust Law with Special Reference to the Coal Mining Industry.*—Amer. Mng. Congr., 1911; Proc., Vol.14, pp. 257-269.

Lewis, T. L.—*Minimum Price of Coal Should Be Raised;* [Read to order "Kokoal," Chicago branch].—Coal Trade Bull., May15,1912; p. 48; 4500 w; 25c.

Lewis, T. L.—*Perplexing Problems Confronting the Coal Mining Industry.*—Coal & Coke Op., Feb.1,1912, p. 65; 2100 w; 25c.

Liwehr, E.—*Die Kohle als Welthandelsware;* [Coal as an article of international trade; discusses chiefly British export trade].—Zentral Verbd. Bergbau Betriebsl.

Oestr., Zts.; Apr.15,1912; p. 221; 2100 w; tables; 45c.

Moore, R. T.—*Growth of Coal Production in the Last 100 Years;* [Read to Instn. of Mng. Engrs (British); abstract].—Coal & Coke Op., Jan.4,1912, p. 6; 1500 w; 25c.

Moorshead, A. J., and W. S. Bogle.—*The Condition of the Bituminous Coal Industry.* Amer. Mng. Congr., 1911; Proc., Vol. 14, pp. 246-256. Abstract in Coll'y Guardn., March1,1912; p. 427; 2000 w; 30c.

Redmayne, R. A. S.—*Output and Value of Coal in* 1910; [Abstract from Part III of British Report on Mines & Quarries].—Coll'y Guardn., Dec.15,1911, p. 1184; 2000 w; tables; 35c. Also in Coll'y Guardn., Dec.15, p. 981; 2000 w; tables; 30c.

Scholz, Carl.—*The Economics of the Coal Industry;* [Reviews rise and development of the Rhein-Westphalian syndicate].—Amer. Mng. Congr., 1911; Proc., Vol. 14, pp. 241-245.

Abstract in Black Diamond, Oct.28,1911, p. 32; 1500 w; 30c. Also in Mining & Engg. World, Nov.4, p. 899; 500 w; 10c.

Seidl, —. *Kohlenpreise und Förderkosten;* [Coal prices and costs of production].—Technik & Wirtschaft, Jan.,1912, pp. 47-58; 75c.

Traer, G. W.—*Anti-Trust Laws in Their Relation to the Coal Industry.*—Amer. Mng. Congr., Proc., Vol. 14, 1911, pp. 270-279.

Abstract in Coal Trade Bull., Apr.1, p. 47; 5000 w; 25c. Also in Mines & Minerals, June, p. 644; 3000 w; 35c.

Williams, W.—*Anti-Trust Laws in Their Relation to the Mining Industry.*—Amer. Mng. Congr., 1911; Proc., Vol. 14, pp. 280-284.

Zern, E. N.—*The Price of Bituminous Coal Compared with Prices of Materials Used in Mining;* [read to Coal Mng. Inst. of Amer.].—Coal & Coke Op., Dec.21,1911, p. 404; 2500 w; 25c. Also in Coal Trade Bull., Jan.2,1912, p. 30; 2500 w; 25c.

Rheinisch-Westfälische Kohlensyndikat.—*Die neuen Kohlen- und Kokspreise;* [New schedule of coal, coke and briquet prices, west Germany, for 1912].—SW. Deu. Industrie Ztg., Jan.30,1912; p. 44; 500 w; table; 35c.

———. *American Federation of Coal Operators Is Formed.*—Black Diamond, Dec.23,1911, p. 15; 3200 w; 30c.

———. *Aus der sächsischen Kohlenindustrie;* [The coal industry of Saxony and assessed and purchase valuations of the properties].—Deu. Bergwerks Ztg., May21, 1912; p. 1; 1000 w; 35c.

———. *Charbonnages belges et françaises;* [Costs and conditions governing coal mining in France and Belgium].—Echo d. Mines, Jan.4,1912, p. 5; 1000 w; 35c.

———. *Coal Lands Owned and Held Under Lease by Operators of Coal Mines;* [from U. S. Census report].—Coal Trade Bull., Dec.15,1911, p. 49; 1500 w; 25c. Also in Mng. Sci., Dec.14, p. 537; 700 w; 20c.

———. *Coal Prices in Germany* [For 1911-1913].—Iron & Coal Trades Rev., Feb. 2,1912; p. 165; 1000 w; table; 30c.

———. *Debatte über den Bericht des Teuerungsausschusses betreffend die Kohlenfrage;* [Austria imperial investigation committee on the high costs of living; debates on the coal problem].—Montanist. Rundschau, March16,1912; pp. 257-264; 7000 w; 45c.

———. *Die Oesterreichische Kartellenquete über die Kohlenindustrie;* [Investigation by the Austrian Ministry of Commerce on the syndicate organization of the coal industry in Austria].—Deu. Bergwerks Ztg., May24,1912; p. 1; May25, p. 1; 2500 w; 50c. Also in Oestr.-Ungar. Montan- & Metall-Ind. Ztg., June2, p. 4; 3000 w; 35c. Also in Zentral Verbd. Bergbau Betriebsl. Oestr., Zts.; Junel, p. 327; 5000 w; 45c.

———. *Die Preispolitik des Kohlensyndikats;* [The price policy of the Rhine-Westphalian Coal Syndicate].—Konjunktur, 1912, p. 16; 80c.

———. *Increased Cost of Production of Anthracite Coal is Responsible for Rise in Prices.*—Coal Trade Bull., June15,1912; p. 51; 1200 w; 25c.

MISCELLANEOUS

Beard, J. T.—*American Versus English Mine Fatalities.*—Coal Age, Jan.6,1912, p. 403; 1600 w; 20c.

Bright, G.—*Does It Pay the Average Coal Mine to Purchase Central Station Power?*—Amer. Inst. Electr. Engrs., Proc., May, 1912; pp. 523-534; $1.15. Abstract in Coal Age, June8, p. 1139; 4000 w; 20c.

Cramer, H.—*Die Nachweisung von Steinkohlen-Vorkommen in Bohrlöchern;* [The identification and discovery of coal in borings].—Kohle & Erz, Apr.22,1912; p. 386; 2000 w; 35c.

Günthersberger, J.—*Weltkohlenstatistik;* [Statistics of coal production of the world's leading producers].—Zentral Verbd. Bergbau Betriebsl. Oestr., Zts; May1,1912; pp. 253-268; tables; 45c.

Hoffman, F. L.—*Coal Mine Mortality Statistics.*—Coal Age, Jan.6,1912, p. 400; 2500 w; tables: 20c.

Lauck, W. J.—*Efficiency of the Bituminous Coal Mine Employe;* [in Pennsylvania, chiefly].—Mining & Engg. World, Jan.20, 1912; p. 117; 2700 w; 10c. Abstract in Coal Trade Bull., Feb.1, p. 43; 2700 w; 25c.

Leprince-Ringuet, A. F.—*Rapport de Mission en Angleterre et en Allemagne zur la Distribution de l'Energie dans les Régions Houillères;* [Report of the French commission to England and Germany on the Distribution of Power in Collieries].—Annales d. Mines (Paris), Oct.,1911; 112 pp.*; $1.50.

Pitaval, R.—*Revue minière et métallurgique de l'année* 1911; [Review of mining and metallurgy in Europe and abroad in 1911; chiefly coal and iron].—Echo d. Mines, Dec.28,1911, p. 1330; 3000 w; 35c.

Reynolds, Sim and W. H.—*Scientific Coal Mine Management.*—Mines & Minerals, March,1912, p. 459; 1800 w; 35c.

Taylor, S. A.—*Coalfields of the World With Statistics and Data Thereon;* [Abstract; read to Coal Mng. Inst. of America].—Coal & Coke Op., Dec.21,1911, p. 410; 5000 w; 25c. Also in Coal Trade Bull., Jan. 2, 1912; p. 43; 5000 w; 25c.

Zern, E. N.—*Are We Making Progress in Coal Mining;* [Operating conditions in America and abroad].—Coal & Coke Op., Apr.11,1912; p. 225; 4500 w; 25c.

———. *Early Days of Coal Mining;* [History in Europe since earliest times].—Coal & Coke Op., Dec.14,1911, p. 375; 5000 w; 25c.

———. *Early History of the Coal Trade;* [in Britain; 13th to 16th centuries].—Iron & Coal Trades, March8,1912; p. 382; 2700 w; 30c.

———. *Review of Foreign Coal Mining Operations in* 1911; [Gt. Britain, Germany, France, Austria, Asia, Africa; world pro-

duction].—Mining & Engg. World, Jan.27, 1912; p. 168; 2500 w; 10c.

———. *The World's Coal Production;* [In 1910; synopsis of British Home Office report].—Coal Age, Jan.6,1912, p. 398; 2400 w*: 20c.

———. *World's Consumption of Bunker Coal.*—Coal & Coke Op., Jan.25,1912, p. 60; 600 w; 25c.

COKING; GAS-PRODUCTION; BY-PRODUCTS.

Gas Works; Gas-Production

Abbott, H.—*A Novel Gas-Holder Foundation;* [Bulged-bottom "Pedestal" concrete piles, New Haven, Conn.].—Engg. News, Jan.4,1912; p. 4; 1800 w*; 25c. Also in Engg. & Contractg., Feb.21, p. 199; 1200 w*; 20c.

Aldrich, H. W.—*Engineering Features of a Large Gas-Holder;* [Design and construction of 10,000,000 cu. ft. Kingsbridge station, N. Y. City].—Engg. Record, Apr.27, 1912; p. 452; 6000 w*; 20c.

Aldrich, H. W.—*The Suitability of Concrete for Gas-Holder Tanks;* [Read to Natnl. Asso. of Cement Users].—Engg. Record, March30,1912; p. 343; 2000 w; 20c.

Baak, B. — *Jahrbuch der Deutschen Braunkohlen-, Steinkohlen- und Kali-Industrie* 1912; [Directory of the lignite, coal and potash mines and affiliated works of Germany; 1912].—Halle; 1912; 246 pp.*; $2 (book).

Bird, V. E.—*Recent Developments in the Manufacture of Water Gas.*—Progressive Age, No. 6, 1912; pp. 244-249; 50c.

Brislee, F. J.—*An Introduction to the Study of Fuel* [and technical application].—London, 1912; pp. 258; 61 figs.; $2.50; (book).

Cortelyou, G. B.—*Commercial and Financial Aspects of the Gas Industry;* [Lecture at centenary celebration of introduction of illuminating gas].—Franklin Inst., Jnl.; June, 1912; pp. 535-561; 65c.

Coste, J. H.—*The Calorific Power of Gas.*—London, 1911; 326 pp.; $2.25 (book).

Douglas, J.—*The Gas World Yearbook,* 1912.—London, 1911; pp. —; (book).

Gill, A. H.—*Gas and Fuel Analysis for Engineers.*—New York, 1911 (6th edition); 139 pp*; $1.25 (book).

Jones, E. C.—*Unstable Hydrocarbons in Illuminating Gas.*—Progressive Age, No. 20, 1911; p. 865-868; 65c.

King, J.—*The Commercial Application of Town's Gas for Furnace Work;* [Use of urban gas in pottery and other furnaces].—English Ceramic Soc., Trans.; Vol. 11, Part 1; 1912; pp. 104-117*; $6.

Mettler, G.—*Permanente Gase und Industrie-Gase, Sauerstoff-Oefen, Sauerstoff-Brenner, Gas-elektrische Oefen;* [Commercial gases, gas and oxygen furnaces and burners, and gas-electric furnaces].—Leipzig, 1912; 13 pp.*; 49 figs.; $1 (book).

Nübling, —. *Der Horizontalofen mit 6-meter Retorten und sein wirtschaftlicher Vergleich mit den anderen modernen Ofensystemen;* [Horizontal oven with 6-meter retorts and its economic comparison with other modern systems].—Jnl. f. Gasbeleuchtg., Jan.6,1912; pp. 1-6*; Jan.13, pp. 25-30; Jan.20, pp. 53-58; 95c.

Schmidt, Fr.—*Leuchtgas Erzeugung und moderne Gasbeleuchtung;* [Illuminating-gas production and the modern gas-light industry].—Brunswick, Germany; 1911; pp. —; 63 figs; $1.50.

White, A. H., P. Barker and H. M. Wilson.—*Coals Available for the Manufacture of Illuminating Gas;* [Tests of coals from Wyo., Mich., Colo., Ill., Tenn., Penn., Ky., N. Mex., Ala., W. Va.].—U. S. Bureau of Mines, Bull. 6, 1911: 77 pp.*; 10c.

———. *Constructing the Foundations for a Large Gas-Holder.*—Engg. Record. Dec.23,1911, p. 749; 2000 w*; 25c.

———. *State and Municipal Regulations for the Quality, Distribution and Testing of Illuminating Gas.*—U. S. Bureau of Standards, Circular No. 32; Apr.1,1912; pp. 133; 50c.

Coke and Coking

Bacon, C. J.—*Some Methods of Coke Dust Disposal.*—Progressive Age, May1,1912; 7 pp.*; 25c.

Boileau, J. W.—*Early Exhaustion of Connellsville Coking Coals Forecasted;* [From Connellsville, Pa., "Courier"].—Coal & Coke Op., June6,1912; p. 363; 800 w; 25c. Also in Coal Age, July20, p. 80; 1000 w*; 20c.

Bondel, —. *Teer-Koksgrus Unterwindfeuerung;* [Down-draft firing of coke breeze and coal tar at the Schwartzkopff machine shop at Lauban].—Jnl. f. Gasbeleuchtg., March9,1912; p. 241-242*; 50c.

Gillon, R.—*A Few Points Concerning By-Product Coke Ovens;* [Read to Natnl. Asso. of Coll'y Managers, S. Wales & Monmouth branch].—Iron & Coal Trades Rev., Feb.23,1912; p. 287; 3500 w; 30c.

Goodall, A.—*A Retort Coke Quencher and Loader;* [Goodall device].—Coal Age, March2,1912; p. 678; 1200 w; 35c.

Goodin, B. J.—*Coke Resources of the Pittsburgh District;* [Read to Foundrym. Asso., Pittsburgh].—Iron Trade Rev., Dec. 14,1911, p. 1051; 2200 w; 20c. Also in Coal & Coke Op., Dec.7, p. 364; Dec.14, p. 382; 2700 w; 30c. Also in Coal Trade Bull., Jan. 15,1912, p. 35; 2100 w; 25c.

Hall, R. D.—*The Jamison Coke Plants, Greensburg, Pa.*—Coal Age, Apr.27,1912; p. 936; 2000 w*; 20c.

Hartmann, W. E. and others.—*Discussion on By-Product Coke Making;* [Before Engrs. Soc. of W. Penn.].—Coal & Coke Op., May30,1912; p. 346; 2500 w; 25c. Also in Iron Age, July11, p. 85; 10,000 w; 30c. Also in Coal Trade Bull., July15, p. 43; 4000 w; 25c. Also in Coal & Coke Op., Aug.1, p. 68; 2700 w; 25c. Also in Coal Age, Aug.3, p. 151; 3500 w; 20c.

Herwegen, L.—*Zusammenfassende Darstellung der Kokereitchnik;* [Encyclopedic of coking practice].—Gelsenkirchen, Germany; 1911; 40 pp; 107 figs; $1.50; (book).

Lessing, R.—*A New Apparatus for the Coking Test of Coals.*—Soc. of Chem'l Ind'y, May31,1912; pp. 465-468*; 65c. Abstract in Coll'y Guardn., May10, p. 937; 500 w*; 35c.

Lewes, V. B.—*Carbonization of Coal;* [Reviews theory and practice of coking and gasifying].—Roy. Soc. of Arts, Jnl., Dec.22, 1911, p. 135; Dec.29, p. 171; Jan.5, p. 188; Jan.12, p. 216; 30,000 w; 80c.

Abstract in Iron & Coal Trades Rev., Dec.1, p. 889; Dec.8, p. 929; Dec.15, p. 965; Dec.22, p. 1011; Dec.29, p. —; 14,000 w; 95c. Also in Coll'y Guardn., Dec.8, p. 1126; Dec.15, p. 1178; Dec.22, p. 1231; Dec.29, p. 1283; 30,000 w*; 80c. Also in Progressive Age, No. 24, 1911, p. 1029-1035; 65c. Also

in Canadian Engr., Apr.25,1912; p. 586; 2700 w; 25c.

Lucas, F. E.—*By-Product Ovens in America.*—Mines & Minerals, Apr.,1912; p. 530; 1800 w; 35c.

Marsden, J. R.—*A Horizontal-Flued Coke Oven.*—Iron & Coal Trades Rev., March15, 1912; p. 405; 750 w*; 30c.

McLeish, J.—*The Production of Coal and Coke in Canada in* 1910.—Canada Dept. Mines, Mines Branch Publication No. 116; 31 pp.; 25c.

Perkins, F. C.—*Electric Coal Levelling Machine for Bee-Hive Coke Ovens.*—Coal & Coke Op., Dec.28,1911, p. 428; 800 w*; 25c.

Pitaval, R.—*La fabrication du coke métallurgique et l'éclairage au gaz;* [Manufacture of coke for the metallurgic and gas-light industries].—Monitr. de l'Industri du Gaz, 1911, No. 20; pp. 457-459; 75c.

Porter, J. J.—*Rational Valuation and Quality-Efficiency of Furnace-Stock;* [Valuing ore, coke and limestones for iron-making]. —Amer. Inst. Mng. Engrs., Bull 63; March, 1912; pp. 279-293; $1.15.

Redmayne, R. A. S.—*Production of Coke and Briquettes in the U. K. in* 1910; [From Part III of Report on British Mines & Quarries].—Iron & Coal Trades Rev., Dec. 15,1911, p. 968; 500 w; table; 30c.

Riehm, Dr.—*Die Verwendung von Koks als Feuerungsmaterial;* [Use of coke as fuel].—Bitumen, Jan.1,1912, p. 5; 1200 w; 35c.

Sherrick, J. L.—*The A-B-C of Iron and Steel: The Manufacture of Bee-Hive-Oven Coke.*—Iron Trade Rev., Jan.4,1912, p. 59-67; 65c.

Simmersbach, O.—*Verwendung von Koksofengas im Martinofen;* [Use of coke-oven-gas fuel in the Martin basic furnace; read to Ver. Deu. Eisenhüttenleute].—Ver. Deu. Ingr., Zts., Nov.4,1911, p. 1857; 1200 w; 50c. Also in Berg- & Hüttenm. Rundschau, July 5,1912; p. 209; 6000 w*; 45c.

English abstract in Iron Age, Feb.8,1912; p. 350; 3500 w; 30c.

Snyder, H. P.—*Connellsville Coke Production for the Year* 1911.—Coal Trade Bull., Jan2,1912, p. 26; 500 w; tables; 25c. Also in Iron Trade Rev., Jan.4, p. 127; 1000 w; tables; 65c. Also in Coal & Coke Op., Jan.18.1912, p. 42; 500 w; table; 25c.

Sp——., Dr.—*Continuierliche Verkokung in stehenden Retorten nach dem Woodall-Duckham System;* [Continuous coking in vertical retorts by the Woodall-Duckall system]. — Montanist. Rundschau, Apr.1, 1912; p. 310; 1500 w*; 45c.

Stansfield, E., and J. B. Porter.—*Manufacture and Testing of Coke;* [Canadian].—Canada Dept. Mines, Mines Branch, Report No. 83; 1912; pp. 205-233*; $1.25.

Stanton, F. M. and A. C. Fieldner.—*Methods of Analyzing Coal and Coke.*—U. S. Bur. Mines, Technical Paper No. 8; 1912; 21 pp*; 10c.

Abstract in Mng. Sci., March28, p. 289; Apr.4, p. 309; 4000 w; 30c. Also in Chemi. Engr., Apr., p. 150; 6000 w*; 35c. Also in Mining & Engg. World, May25, p. 1101; 3600 w; 10c.

Tupper, C. A.—*A* 15,000-*Horsepower Coke-Oven Gas-Engine Plant;* [Eschweiler Mng. Co., near Aachen].—Iron Age, Dec.21, 1911, p. 1354; 2000 w*; 30c.

Tupper, C. A.—*Extensive Use of Coke-Oven Gas;* [European power installations using coke gas].—Coal Age, Apr.6,1912; p. 832; 2500 w*; 20c. Reprint in Power, May 21, p. 736*; 15c.

Tupper, C. A.—*Operating on Coke-Oven-Gas versus Steam Turbine* [at Government collieries, Saarbrücken district, Germany]. —Mining & Engg. World, Dec.23,1911, p. 1255; 4000 w*; 10c.

Wagner, A.—*Moderne Kokereien mit Gewinnung der Nebenprodukte;* [Modern by-product coke-ovens; construction and operation, and methods of handling by-products]. —Bergbau, Jan.4,1912, p. 1; Jan.11, p. 13; Jan.18, p. 29; Jan.25, p. —; 6,000 w*; 75c.

"T. I. S."—*Koks, seine Darstellung und Verwendung, Bewertung und Bearbeitung;* [Coke, its production, use and valuation].—Eisen Ztg., March23.1912; p. 201; March30, p. 223; Apr.13, p. 261; Apr.20, p. 277; 5000 w; 80c.

———. *Aplicatión de los gases de los hornos de cok a los hornos Martin;* [Use of coke-oven gases in Martin furnaces in Belgium and Germany].—Ingeniería, May 10,1912; p. 153; 1000 w; 35c.

———. *Coal and Coke Production in the United States;* [By states, 1910 and 1911]. —Coal Age, Jan.6,1912, p. 424; 300 w; tables; 20c.

———. *Coal and Coke in* 1911; [General summary of U. S. production].—E. & M. J., Jan.6,1912, p. 98; 1000 w; 25c.

———. *Die Untersuchung von Giessereikoks;* [The testing and examination of foundry coke].—Eisen Ztg., May4,1912; p. 311; May11, p. 331; 2500 w; 50c.

———. *Dispositif pour l'extinction, le séchage et l'emmagasinage du coke;* [Frère coke quencher and dryer].—Rev. Noire, March3,1912; p. 102; 750 w*; 35c.

———. *Retort Oven Plant at Gary, Indiana.*—Coal Age, Dec.23,1911, p. 337; 2000 w*; 25c.

———. *Electric Equipment of Gary Coke Plant;* [8,000-ton by-product plant of Indiana Steel Co.; handling, etc., apparatus]. —Iron Age, Dec.28,1911, p. 1406; 2500 w*; 30c. Also in Iron Trade Rev., Dec.21,1911, p. 1093; 2500 w*; 25c.

———. *The World's Largest By-Product Coke Plant* [at Gary, Ind.].—Iron Trade Rev., Dec.21,1911, p. 1093; 2700 w*; 20c.

———. *List of By-Product Coke Ovens in the U. S.;* [From Dept. of Agric., Circular No. 97].—Coal Age, March30,1912; p. 808; 300 w; 20c.

———. *The Coal Production of Canada,* 1910 *and* 1911; [From McLeish's official reports; also coke.]—Colliery Guardian, Apr.17,1912; p. 19; 3000 w*; tables; 35c.

———. *Low Prices and Decreased Production of Coke;* [Review of Connellsville industry 1911].—Iron Trade Rev., Jan.4, 1912, p. 127; 1000 w; table; 65c.

———. *Simon-Carves Coke Ovens in India.*—Iron & Coal Trades Rev., Dec.15,1911, p. 983; 300 w*; 30c.

———. *Scale of Wages in Connellsville Coke Region,* 1894-1912; [From Connellsville "Courier"].—Iron Age, Jan.25,1912, p. 259; 200 w; tables; 30c.

———. *Use of Coke-Oven and Blast-Furnace Gases in Westphalia.*—Iron & Coal Trades Rev., March22,1912; p. 458; 500 w; 30c.

Producer-Gas; Gas-Producers

See also Gas Engines in Chapter 12.

Amsler, W. O.—*Recent Improvements in Producer-Gas Appliances.*—Ind'l World, No. 12, 1912; p. 342-345; 50c.

Bucher, W.—*Untersuchung über die Verbrennung methanhaltiger Gasgemische;* [Researches on the combustion of gas mixtures containing methane].—Berlin, 1912; 45 pp; 20 figs; $1 (pamphlet).

Burke, U. W.—*New System for Generating Gas;* [Booty process using 98% air and 2% gasoline vapor; from U. S. Consul. Rep.].—Mining & Engg. World, May4,1912; p. 949; 300 w; 10c.

Bütow and Dobbelstein. — *Ausnutzung minderwertiger Brennstoffe auf Zechen des Oberbergamtsbezirks Dortmund, XIII;* [Utilization of refuse coal and low-grade fuels in Dortmund collieries, Part 13; Tests of gas-producers, II].—Glückauf, Jan.6, 1912; pp. 1-15*; 50c.

Champly, R.—*Gazogènes et moteurs à gaz à la portée de tous;* [Gas-producers and gas-engines and their every-day applications].—Paris, 1911; 200 pp*; $2 (book).

Chorlton, A. E. L.—*Gas Engines for Collieries;* [Compares Mond producers and by-product coke ovens and utilization of gas-engine power at British mines; read to Midland Instn. of Mng., etc., Engrs.; 1911; abstract].—Iron & Coal Trades Rev., Dec.8, 1911, p. 932; Dec.15, p. 609; 7000 w*; 50c. Also in Coll'y Guardian, Dec.22, p. 1227; Dec.29, p. 1299; 7000 w*; 50c. Also in Mechl. World, Dec.22, p. 296; 1000 w*; 35c. Also in Mining & Engg. World, Jan. 20,1912; p. 112; 1000 w*; 10c. Also in Coal Age, Apr.13,1912; p. 876; Apr.20, p. —; 5000 w*; 30c.

Dowson, J. E. and A. T. Larter.—*Producer Gas.*—London, 1912 (3d edition); pp. 336; $3 (book).

Durley, R. J.—*Coals of Canada,* by J. B. Porter and others; *Part 7, Boiler Tests; Part 8, Gas Producer Tests.*—Canada Dept. Mines, Mines Branch Report No. 83; 1912; Vol. 2; pp. 3-120*; $1.25.

Fernald, R. H.—*The Gas-Power Field for 1911;* [Amer. Soc. Mechl. Engrs.; annual address of chairman of gas-power section].—Jnl. of El'y Power & Gas, Dec. 23, 1911, p. 585; 2500 w; 35c. Also in Cheml. Engr., Jan.,1912, p. 15; 3200 w; 35c. Also in Engg. News, Jan.4, p. 24; 1800 w; 25c. Also in Ind'l Engg., March, p. 205-209; 1800 w; 30c. Also in Iron Trade Rev., July 18, p. 123; 2500 w; 20c.

Fielden, F.—*A Few Problems in Bituminous Suction Gas Plants.*—Engnrg., Feb.9, 1912; p. 175; 4200 w; 35c. Reprint in "Power," Apr.30,1912; p. 622; 15c.

Garland, C. M.—*Bituminous-Coal Gas-Producers for Power;* [Read to Amer. Soc. Mechl. Engrs., 1912].—Power, June25, p. 903; 2100 w*; 15c. Also in Practl. Engr., July15, p. 712; 4500 w*; 25c.

Garland, C. M. and A. P. Kratz.—*Tests of a Suction Gas Producer* [Otto No. 3].—Practl. El'y & Engg., Jan.,1912; p. 186; 4200 w*; 35c.

Geipert, —. *Der Betrieb von Generatoröfen;* [Firing practice in gas producers].—Jnl. f. Gasbeleuchtg., March2,1912; p. 201-205*; March9, pp. 225-229*; 75c.

Gobiet, A.—*Der Gleichzugsregenerativ-Koksofen, System Kros;* [The Kros uniform draft regenerative oven].—Montanist. Rundschau, Apr.16,1912; p. 362; 1000 w*; 45c.

English translation in Coal Age, July20, p. 84; 1500 w*; 20c.

Gwiggner, A.—*Zur Teerbestimmung im Generatorgas;* [Tar estimation in producer-gas].—Chemiker Ztg., Apr.25,1912; p. 461; 1000 w*; 35c.

Gwosdz, J.—*Sauggaserzeuger für Steinreiniger;* [The elimination of dust and cinders from producer-gas while hot].—Stahl & Eisen, Jan.4,1912, p. 24; 300 w*; 75c.

Gwosdz, J.—*Neue Gaserzeuger für feinkohlen;* [Some suction gas-producers for hard coal].—Giesserei Ztg., Feb.15,1912, p. 120; 1800 w*; 40c.

Gwosdz, —. *Neue Gaserzeuger für feinkörnige oder staubförmige Brennstoffe;* [New gas producers for fine or dust coals].—Elektrotechn. Anzgr., Feb.11,1912; pp. 143-145*; Feb.15, pp. 157-158*; 75c.

Hassenstein, W.—*Kontrolle von Generatorgas Analysen;* [Control of tests and analyses of producer gas].—Chemiker Ztg., Apr.2,1912; p. 537; 2000 w; 30c.

Hempl, —. *Brennmaterial für Gasgenerator Feuerungen;* [Consideration of fuels for gas producers].—Kohle & Erz, Feb.5, 1912; p. 122; 2100 w; 35c.

Hermanns, —. *Ueber eine neue Bauart des Kerpely Gaserzeuger;* [New type of Kerpely gas producer].—Dingler's Polytechn Jnl., March9,1912; pp. 149-151*; 50c.

Hoeltje, —. *Die Kraftversorgung des Kleingewerbes durch Gas und Elektrizität;* [Gas versus electric power for the small industrial plant]. — Dingler's Polytechn. Jnl., Jan.6,1912; p. 7-10; Jan.13, p. 25-29*; $1.

Hofman, J.—*Ueber Gaserzeuger;* [Recent British and American new gas-producers].—Stahl & Eisen, Jan.18,1912, p. 111; 1800 w*; 75c.

Lewis, R. N.—*Suction-Gas for Power Purposes.*—Mng. & Engg. Rev., Oct.,1911, p. 34; Nov., p. 80; Dec., p. 138; 6500 w*; 35c.

Lucke, C. E.—*The Gasification of Fuel;* [2: Principles of gas-producers; 3: Typical forms of construction; 4: Suggestions for improvement in producer construction].—Engg. Mag., Feb.,1912; p. 723-730; March, pp. 889-901; April, p. 76-86; 15,000 w*; 90c.

Mann, —; and Wüstefeld.—*Vergasung minderwertiger Brennstoffe;* [Gasification of low-grade fuels; waste products of coal mines, coke and gas works].—Glückauf, May25,1912; p. 830-834; 50c.

Marischka, —. *Die Zentralgeneratorgasanlagen in den Wiener städtischen Gaswerken;* [The central generator plant in the Vienna municipal gas works].—Jnl. f. Gasbeleuchtg., Apr.13,1912; p. 345-350*; 75c.

Meuskens, Cl.—*Kontinuierlich arbeitende Generatoren zur Vergasung minderwertiger Brennstoffe;* [Continuous producers for gasification of low-grade and waste coals, coke breeze, etc.].—Techn. Blätter, May25, 1912; p. 162; Junel, p. 171; 2500 w*; 50c.

Meyer.—*"Pintsch" Gas-Producers;* [Using coke breeze and coking refuse, locomotive smoke-box cinders, etc.; from Jnl. f. Gasbeleuchtg.].—Iron & Coal Trades Rev., Apr. 26,1912; p. 645; 1000 w*; 35c.

Morette, A.—*Compte rendu des travaux de la section de Métallurgie au Congrès International de Düsseldorf;* [Summary of papers on metallurgy read at International Mining Congress, Düsseldorf, 1910; chiefly on iron and steel, and on gas-producers].—Soc. de l'Ind. Minérale St. Etienne, Bull; Jan.,1912; pp. 5-122*; $1.

Royds, R.—*The Testing of Motive Power Engines; Including Steam Engines and Turbines, Locomotives, Boilers, Condensers, Internal Combustion Engines, Gas Producers, Refrigerators, Air Compressors, Fans, Pumps, etc.*—New York, 1911; 396 pp*; $4.00; (book).

Schmatolla, E.—*Natural Draft and Natural Pressure;* [With special reference to a producer-gas fired shaft-kiln for lime, magnesite or other stone].—Natnl. Lime Mfrrs. Asso., Proc. 10th Annual Convention, Bull. No. 9; 1912; 23 pp*; 50c.

Schraube, G.—*Ueber das Gleichgewicht des Generatorgases;* [The weight of producer gas].—Berlin Techn. Hochschule Dissert; 1912; 39 pp*; $1 (thesis).

Schultze, —. *Wassergas-, Halbwassergas-, und Sauggasanlagen;* [Water, semi-water and suction gas-producers].—Gasmotoren Technik, March,1912; pp. 181-182; 75c.

Seager, J. A.—*Deterioration of Suction Gas Producers.*—Power, June11,1912; p. 837; 1000 w; 15c.

Shutt, W. F.—*Utilization of Low-Grade Fuel;* [Texas crushed-bone lignites in gas-producers].—Coal Age, May4,1912; p. 979; 750 w; 20c.

Strahl, G.—*Erd-, Mond-, Torf-, Blau-, und andere Gase;* [Natural, Mond, peat, oil and other gases and applicability in gas engines].—S. W. Deu. Industrie Ztg., May28,1912; p. 295; 2000 w; 35c.

Turner, R. C.—*A Dependable Small Producer Plant;* [Aekerlund equipment at Atlanta, Ga.].—Power, March26,1912; p. 435; 1500 w*; 15c.

Walker, D. R.—*Enriching Producer Gas.*—Power, Feb.27,1912; p. 296; 600 w*; 15c.

———. *A 600-Ton Coal Bin and Tower;* [Storage at gas-producer plant of Republic Iron & Steel Co., Haselton, O.].—Engg. Record, Apr.20,1912; p. 428; 1000 w*; 20c.

———. *Gas-producer and By-product Plants;* [Practice at Sheffield, Engl., steel works].—Mining & Engg. World, May25, 1912; p. 1090; 600 w; 10c.

———. *Hilger Gas-Producers at Port Clarence;* [Data on operation].—Iron & Coal Trades Rev., Feb.16,1912, p. 252; 500 w; 30c.

———. *Kerpely High-Pressure Gas-Producer.*—Iron & Coal Trades Rev., March1,1912, p. 330; 1000 w; 30c.

———. *Tests of the Rehmann Revolving-Grate Gas-Producer.*—Iron & Coal Trades Rev., Jan.12,1912; p. 62; 800 w; 30c.

———. *The Farnham Suction Gas-Producer; Tests on Bengal Coal.*—Indn. & Eastn. Engr., Jan.,1912; p. 21; 2500 w*; p. —; 3000 w; 50c.

———. *Ueber die Verwendung roher lignitischer Braunkohle zur Darstellung von Generatorgas;* [The use of woody lignitic coals in gas-producers, Westerwald, Germany, low-grade lignites].—Stein- & Braunkohle, Apr.15,1912; p. 93; May1, p. 103; 3600 w; 50c.

PEAT GAS-PRODUCERS

See also under Peat.

Born, A.—*Kombination von Vergasung und Verkokung von Torf;* [Combination gasification-coking of peat].—Ver. z. Fördg. Moorkultur (Deu.), Mittlngn; No. 23, 1911; pp. 470-473*; $1.

Frank, —. *Verwertung der Moore durch Gewiuunug von Kraftgas und Ammoniak;* [Utilization of peat bogs for power gas and ammonia].—Jnl. f. Gasbeleuchtg., Jan.20, 1912; pp. 49-53; 50c.

Haanel, B. F.—*The Peat-Producer-Gas Power Plant at the Government Fuel-Testing Station;* [Körting equipment at Ottawa, Canada; from Canadian Peat Soc., Jnl.].—Canadian Engr., May2,1912; p. 602; 2000 w*; 25c.

Heinz, C.—*Peat Gas-Producer and Peat Gas Engine;* [at Goerlitz machine works, Germany; abstract and translation from Stahl & Eisen, Aug.17,1911, p. 1359].—Met. & Chemi. Engg., May,1912; p. 283; 600 w*; 25c.

Percy, P. C.—*A German Peat Gas Power Plant;* [Heinz producer and Görlitzer engine].—Power, Jan.9,1912, p. 53; 750 w*; 20c.

Thackara, A. M.—*Engine Gas from Peat;* [Görlitz generator and engine].—U. S. Consul. Rep., Apr.17,1912; p. 232; 1000 w; 20c.

Wolff, Dr.—*Ueber die neueren Bestrebunger zur Gewinniung von Gas und Ammoniak aus Torf;* [Newer developments in gas and ammonia production from peat; read to Ver. z. Fördg. Moorkultur (Deu.); brief abstract].—Chemiker Ztg., May2,1912; p. 496; 500 w; 35c.

———. *A Successful Irish Peat-Gas Plant; at Portadown.*—El. Rev. (London), Dec.22,1911, p. 1017; 1000 w*; 35c.

OIL GAS-PRODUCERS

Roehlike, E. M.—*Ein neues Oel- und Teergas;* [The Rincker and Wolter new gas-producer using petroleum and tar wastes].—Bitumen, March16,1912; p. 85; 1800 w*; 35c.

Dr. G.—*Neuerungen in der Oelgaserzeugung;* [Improvements and innovations in oil gas-producers in Germany and America].—Petroleum, May22,1912; p. 834; 3000 w*; 45c.

———. *Crude Oil Gas;* [Wisconsin crude-oil gas-producer].—Practl. Engr., March1, 1912; p. 253; 1000 w*; 25c.

By-Products

See also "Asphalts and Bitumens."

Atwater, C. G.—*Plants for Making Ammonium Sulphate.*—Progressive Age, No. 1, 1912; pp. 15-21*; 65c.

Cooper, G. S.—*Fixed Ammonia in the "Direct" Recovery Processes.*—Iron & Coal Trades Rev., March8,1912; p. 373; 800 w; 30c.

Desserre, O.—*Sulphate of Ammonia Industry in Germany;* [Translated from "L'Engrais"]. — Amer. Fertilizer, Apr.6, 1912; p. 44; 1800 w; 25c.

Dobbelstein. —. *Ausnutzung der Koksofengase zur Gewinnung von Salpetersäure aus dem Stickstoff der Luft;* [Utilization of coke-oven gases in manufacturing nitrates from atmospheric nitrogen].—Glückauf, Feb.24,1912, pp. 289-300*; 45c. Abstract in English in Iron & Coal Trades Rev., June28, p. 1042; 2500 w*; 35c.

Donath, Ed., and Fr. Bräunlich.—*Zur Kenntnis der Kohlen und Verkohlungsrückstände;* [Chemical tests to distinguish the different varieties of coals or coal residues].—Chemiker Ztg., Apr.4,1912; p. 373; 3500 w; table; 30c.

Duisberg, —. *Die Wissenschaft und Technik in der Chemischen Industrie mit besonderer Berücksichtigung der Teerfarbeninduatrie;* [Science and technique in the chemical industries with special reference to coal-tar dyes].—Zts. f. angew. Chemie, Jan. 5,1912; p. 3-14; 75c.

Ellerton, J. G.—*The Estimation and Elimination of Sulphur Compounds in Commercial Benzol.*—Soc. of Cheml. Ind'y, Jan.15, 1912; p. 10; 1500 w; 65c.

Erberich, —. *Benzolfabriken in Verbindung mit Schachtanlagen;* [Benzol works in combination with vertical coke retorts].—Bitumen, March1, p. 68; 500 w*; 35c.

Feld, W.—*Ueber die Bindung von Ammoniak allein oder zusammen mit Schwefelwasserstoff durch schweflige Säure unter gleichzeitiger Bildung von Ammoniumsulfat und freiem Schwefel;* [Production of ammonia alone or with hydrogen sulphide from sulphurous acid, with simultaneous formation of amm. sulphate and free sulphur; comparison of acid from coal gasification vs. acid from pyrite].—Zts. f. angew. Chemie, Apr.12, 1912; p. 705; 6000 w; 35c.

Fischer, E. J.—*Die künstlichen Peche und Asphalte;* [The artificial pitches and asphalts].—Kunststoffe, Vol. 1, 1911, pp. 421-423; 447-453; 471-474; $1.50.

Fisher, H.—*Sulfate of Ammonia Manufacture.*—Progressive Age, No. 1, 1912; pp. 23-25; 65c.

Fowler, G. J., E. Arden and W. T. Lockett.—*Influence of Waste Liquor from Sulphate of Ammonia Plants on Bacterial Purification of Sewage.*—Soc. of Cem'l Ind'y, May31,1912; pp. 471-477; 65c.

Gwiggner, —. *Die Gewinnung der Nebenerzeugnisse beim Gaserzeugerbetrieb;* [The recovery of by-products in gas-producer practice].—Stahl & Eisen, Dec.21, 1911; pp. 2085-2088; Feb.1,1912, p. 188; $1.25.

Hilgenstock, R. W.—*The Manufacture of Aqua Ammonia and Sal Ammoniac Direct from Raw Gas Liquor.*—Cheml. Engr., May, 1912; p. 195; 2500 w*; 35c.

Hilgenstock, R. W.—*Apparatus for the Manufacture of Aqua Ammonia from Sulfate of Ammonia.*—Cheml. Engr., Jan.,1912, p. 20; 1200 w*; 35c.

Hubbard, P.—*Bituminous Roads and Pavements and Their Materials of Construction.*—Franklin Inst.; Jnl.; Apr.,1912; pp. 343-362*; 65c.

Hubbard, P.—*American Coke-Oven Tars;* [Applicability as road-binding bitumens].—U. S. Office of Public Roads, Circular No. 97; 1912; 11 pages; 20c. Abstracted in Engg. Record, Feb.24,1912; p. 207; 850 w; 25c. Also in Engg. & Contractg., March 13,1912; p. 292; 1200 w; 20c. Also in Cheml. Engr., March, p. 92; 3600 w; 35c. Also in Canadian Engr., Apr.25, p. 573; 1600 w; 30c.

Lishman, G. P.—*The Production of Ammonium Sulphate in the Saturator.*—Soc. of Cheml. Ind'y; Jnl., March30,1912; p. 269-272; 1800 w; 65c.

Müller, —. *Ueber Entwässerung des Wassergasteeres;* [The dewatering of water-gas tars].—Jnl. f. Gasbeleuchtg., March 9,1912; p. 229-231*; 50c.

Pennock, J. D.—*Losses of Combined Nitrogen;* [Utilization of coke-oven by-products].—Jnl. of Indl. & Engg. Chem'y, March,1912, p. 172; 4500 w*; 65c. Also in Cheml. Engr., June, p. 231; 3000 w; 35c.

Pfudel, —. *Verfahren zur direkten Gewinnung des Ammoniaks aus den Gasen der trockenen Destillation durch Schwefelsäure;* [Sulfuric acid process for direct recovery of ammonia from the gases of dry distillation; Mont Cenis colliery methods].—Jnl. f. Gasbeleuchtg., Dec.30,1911; pp. 1272-1273; 50c.

Rasser, E. O.—*Steinkohlenteeröl;* [The coal-tar oil industry].—Kali Erz & Kohle, March25,1912; p. 307; 1800 w; 35c.

Reumaux, E.—*L'emploi des produits distillés de la houille dans le moteur Diesel;* [Use of coal tar and products in the Diesel engine].—Echo d. Mines, May27,1912; p. 618; 750 w; 35c.

Waggaman, Wm. H.—*Memorandum on Ammonium Sulphate;* [Methods and costs; fertilizer value].—U. S., 62d Congr., 2d Session, Senate Doc. No. 190; 1912; pp. 119-124.

Wenzel, E.—*Die Gewinnung des Kokereiteeres;* [Recovery of coke tars].—Bitumen, Apr.16,1912; p. 117; 300 w; 35c.

Ch. P.—*La saturation directe de l'ammoniaque;* [Direct saturation of ammonium sulfate in Otto by-product ovens at the Béthune coke works, France].—Phosphate, Jan.15,1912; p. 57; 1200 w; 35c.

Ch. P.—*Le crude ammoniac et la traitement des matières épurantes;* [Crude ammonia from illuminating gas, and its refining].—Phosphate, Jan.29,1912; p. 99; 1000 w; 35c.

Bradbury & Hirsch Co.—*Sulphate of Ammonia in* 1911; [Review of British production and markets].—Iron & Coal Trades Rev., Jan.19,1912; p. 83; 1200 w; 30c. Amer. Fertilizer, Feb.10,1912; p. 21-29; 7000 w; 25c.

———. *Der gegenwartige Stand der Steinkohlenteerindustrie;* [The present status of the coal-tar and by-products industries].—Bitumen, Feb.16,1912; p. 53; 1800 w; 35c.

———. *Die Verwendung von deutschem Steinkohlenteeröl;* [The uses of German coal-tar oil].—Bitumen, May1,1912; p. 133; 750 w; 35c.

———. *Fabrication du sulfate d'ammoniaque en* 1911; [World's production of ammonium sulphate in 1911].—Jnl. du Four Electriq., March1,1912; p. 108; 1000 w; 35c.

———. *Fixed Ammonia in the Direct Recovery Process.*—Iron & Coal Trades Rev., March1,1912, p. 327; 1000 w; 30c.

———. *La fabrication de l'ammoniaque et du sulfate d'ammoniaque au moyen de la cianamide de calcium;* [Manufacture of ammonia and ammonium sulphate from calcium cianamide].—Phosphate, Feb.26, 1912, p. 181; 500 w; 35c.

———. *La fabrication du sulfate d'ammoniaque en* 1911; [Review of world's production of ammonium sulfate in 1911].—Echo d. Mines, Jan.29,1911; p. 114; 1000 w; 35c.

———. *The Simon-Carves By-Product Recovery Process.*—Iron & Coal Trades Rev., Jan.19,1912; p. 98; 3000 w*; 30c.

PETROLEUM AND OILS.

See also Natural Gas; also Asphalts.

Statistics.

Breen, L. A.—*Proving the Stability of the Petroleum Supply;* [Review of production in 1911; from U. S. Geol. Survey report].—Mng. Sci., Jan.25,1912, p. 76; 2000 w; 25c.

Day, David T.—*The Production of Petroleum in* 1910; [Cal.; Colo.; Ind.; Ill.; Kans.; Ky.; La.; Mich.; Mo.; N. Y.; Ohio; Okla.; Penn.; Texas; Utah; Wyo.; W. Va.; also Canada, Mexico, Trinidad, Barbados, Venezuela, Peru, Argentina, Russia, Austria-Hungary, Roumania, Germany, Gt. Britain, Italy, N. S. Wales, India, Japan, Formosa, China, Dutch East Indies].—U. S. Geol. Survey, Mineral Resources f. 1910; 1911; 136 pp.; 10c.

German abstract in Petroleum, Feb.7,

1912, p. 460; March6, p. 592; 7500 w; 65c. Also in Allgm. Oestr. Chemiker Ztg., March 15,1912, p. 42; Apr.1, p. 51; Apr.15, p. 60; May1, p. 68; 6000 w; $1.25.

Dvorkowicz, P.—*Die Petroleum Industrie* 1911; [World's petroleum production and review in 1911; from Petroleum Rev.]. —Allgm. Oestr. Chemiker Ztg., March1, 1912, p. 37; March15, p. —; 3000 w; 50c.

Lazare.—*La production mondiale du naphte en* 1910; [World's production and consumption of petroleum and fuel oil in 1910; figures of Baku Chamber of Commerce].—Echo d. Mines, Dec.21,1911, p. 1324; 1200 w; 35c.

Miller, C. A.—*Mexican Crude-Oil Shipments in* 1911.—U. S. Consul. Rep., Feb. 14,1912; p. 685; 250 w; 20c.

Wolf, J. H. G.—*Production and Prices in the California Oilfields;* [Review for 1911]. —M. & S. P., Jan.6,1912, p. 22; 2100 w*; 35c.

K. P.—*Die Petroleumproduktion der Vereinigten Staaten im Jahre,* 1911; [Preliminary oil production figures for the U. S., 1911].—Petroleum, Apr.17,1912; p. 779; 2000 w; 50c.

K. P.—*Der Petroleumhandel der Vereinigten Staaten von Amerika in den Jahren,* 1909 *bis* 1911; [Petroleum and oil importations and exports of the U. S., 1909 to 1911].—Petroleum, May1,1912; p. 821-825; 45c.

U. S. Bureau of Statistics.—*Petroleum Exports and Imports in* 1911 [in U. S.].— Oil Age, March1,1912; p. 5; 1600 w; 20c.

———. *California Oil Exports in* 1911. —Oil Age, Feb.23,1912; p. 1; 750 w; 20c.

———. *California;* 1911 *Statistics Complete.*—Oil & Gas Jnl., Feb.1,1912, p. 12; 2000 w; tables; 20c.

———. *Ausfuhr von Naphthaprodukten aus Baku im Jahre,* 1911; [Statistics of shipments of petroleum and petroleum products from the Baku district, 1911].— Chem. Rev. (Fett & Harz), May,1912; p. 118; 400 w; tables; 50c.

———. *Die amerikanische Petroleumausfuhr* 1911; [American oil and petroleum exports, 1911; from the Petroleum Review]. —Allgm. Oestr. Chemiker Ztg., June1, 1912; p. 86; 1000 w; 45c.

———. *Die Lage des deutschen Petroleum Marktes im Jahre* 1911; [Review of the German petroleum market in 1911].— Allg. Oestr. Chemiker Ztg., March1,1912, p. 33; 1600 w; 35c.

———. *Die Mineralöleinfuhr Deutschlands im Jahre* 1911; [The petroleum and oil imports of Germany, 1911].—Petroleum, Feb.7,1912; p. 466; 1800 w; tables; 45c.

———. *Die Petroleum Einfuhr nach England,* 1911; [Petroleum and petroleum-products importations in Gt. Britain in 1911].—Allgm. Oestr. Chemiker Ztg., March 15,1912; p. 45; 750 w; tables; 45c.

———. *Ein- und Ausfuhr von Mineralölen Oesterreich-Ungarns,* 1911; [Imports and exports of crude oil. Austria-Hungary, 1911].—Petroleum, March6,1912; p. 610; 1000 w; tables; 45c.

———. *November Figures;* [Oil Production and Wells in California].—Oil Age, Dec.29,1911, p. 1; 1000 w; table; 20c.

———. *Production and Consumption for* 1911; [California Oil].—Oil Age, Feb.2, 1912; p. 1; Feb.9, p. 1; 1500 w; tables; 30c.

———. *January Production.* 1912; *California Oil Fields.*—Oil Age, March1,1912; p. 1; 750 w; table; 20c.

———. *February Consumption;* [Statistics of California oil production and consumption].—Oil Age, March29,1912; p. 1; 1000 w; 20c.

———. *March Consumption;* [Statistics of California production, March,1912].— Oil Age, Apr.26,1912; p. 1; 750 w; table; 20c.

———. *Lage der galizischen Erdölindustrie im Jahre,* 1910; [The Galician petroleum industry in 1910; from German consular report].—Petroleum, Apr.17,1912; p. 785; 1200 w; 50c.

———. *Notre commerce extérieur en pétroles et dérivés* 1911; [French imports and exports of petroleum and petroleum derivatives in 1911].—Echo d. Mines, Feb. 12,1912; p. 188; 300 w; table; 35c.

———. *Statistik über die Ergiebigkeit der Tustanowicer Rohölschächte seit Beginn der Produktion;* [Statistics of petroleum production by wells in the Tustanowicz field since its beginning to 1910, inclusive]. —Petroleum, Jan.3,1912; p. 354-357*; 50c.

———. *Production of Petroleum in the U. S. in* 1911.—Mining & Engg. World, Jan. 27,1912, p. 184; 4200 w; 10c.

German abstract in Petroleum, March 20, p. 657; 1000 w; table; 45c.

Oil Fields.

a GENERAL.

House, W.—*European Oil Review for* 1911; [Baku, Grozny, Maikop, Kuban and Taman, Samura, Urals, Siberia, Roumania, Austria-Hungary, Scotland].—Oil & Gas Jnl., Jan.25,1912, p. 6; 2400 w; 20c.

Redwood, Sir B.—*World's Oil Supplies Available for Power Purposes;* [Extract from memoir of British Science Guild].— Mng. Jnl., May11,1912; p. 457; 2000 w; 35c.

———. *Review of Some Foreign Oil and Gas Fields;* [Russia, Roumania, Austria-Hungary, Madagascar, Dutch E. Indies, Argentina, Mexico, Trinidad in 1911].—Mining & Engg. World, Jan.27,1912, p. 187; 3000 w; 10c.

Abstract in German in Allgm. Oestr. Chemiker Ztg., June1, p. 82; 2500 w; 45c.

b-c WESTERN UNITED STATES.

For California, see under California, Chapter 1.

Dinsmore, C.—*The Southwestern Oil Situation;* [7-Lakes district, N. Mex.; and various Arizona districts].—El Paso Mng. Jnl., March,1912; p. 8; 5000 w; 35c.

Jamison.—*Wyoming,* 1911.—See Wyoming.

Knight, W. C.—*The Green River, Utah, Oil Field.*—Salt Lake Mng. Rev., Feb.29, 1912; p. 11; 2400 w*; 25c.

Merrill, F. J. H.—*The Spring Valley Oilfield in Southwestern Wyoming.*—M. & S. P., Jan.27,1912; p. 163; 2100 w*; 20c.

Parks, H. M.—*Resources of Oregon.*—See under Oregon.

Wegemann, C. H.—*The Powder River Oil Field, Wyoming.*—U. S. Geol. Survey, Bull. 471-A; 1911; pp. 52-71*; 10c.

Abstract in Mining & Engg. World, June 22,1912; p. 1301; 1600 w*; 10c.

Woodruff, E. G.—*Geology of the San Juan Oil Field, Utah.*—U. S. eGol. Survey, Bull. 471-A; 1911; pp. 72-100*; 10c.

Abstract in Mining & Engg. World, June 22, p. 1305; 1200 w*; 10c.

"R. H. W."—*Wyoming;* [Oil developments in 1911].—Oil & Gas Jnl., Jan.25, 1912, p. 24; 1200 w; 20c.

———. *Development of the Green River Oil Fields;* [Utah; eastern or Klondike section].—Salt Lake Mng. Rev., May30, 1912; p. 11; 2700 w*; 25c.

———. *Improved Conditions in San Juan Oil Fields.*—Salt Lake Mng. Rev., Dec. 30,1911, p. 11; 2400 w*; 25c.

———. *Le pétrole au Wyoming;* [Notes on the Salt Creek oil field, Wyoming].—Pétrole, March1,1912; p. 3; 1000 w; 35c.

———. *The Status of the Oil Industry in Colorado.*—Mining & Engg. World, Apr. 6,1912; p. 756; 750 w; 10c.

d EASTERN AND CENTRAL U. S.

Blatchley, R. S.—*Das neue Carlyle Erdölfeld in Illinois;* [The new Carlyle oilfield in Illinois; from Petroleum Rev.].—Organ d. Bohrtechniker, Feb.1,1912; p. 34; 1000 w; 45c.

Blatchley, R. S.—*Petroleum in Illinois in* 1911.—E. & M. J., Jan.6,1912, p. 96; 1500 w; 25c. Also in Mining & Engg. World, Jan.27, p. 189; 25c.

Abstract in German in Allgm. Oestr. Chemiker Ztg., Apr.1,1912, p. 54; 500 w; 35c.

Byrne, Geo.—*Blue Creek Oil Development, W. Va.*—Manfrrs. Record, Feb.29, 1912; p. 49; 2700 w*; 25c.

George, H. C.—*The Appalachian Oil Fields in* 1911; [N. Y.; Penn.; W. Va.; southeast Ohio; Ky.].—E. & M. J., Jan.6, 1912, p. 97; 500 w; 25c.

George, H. C.—*The Lima Oilfield in* 1911. —E. & M. J., Jan.6,1912, p. 97; 200 w; 25c.

Haworth, E.—*Oil and Gas in Mid-Continental Field;* [Review of progress in 1911]. —E. & M. J., Jan.6,1912, p. 95; 1500 w; 25c.

Hudson, W. B.—*Kentucky Oil Fields;* [Review for 1911 and more recent developments].—Manfrrs. Record, Feb.1,1912; p. 68; 750 w; 25c.

Munn, M. J.—*The Campton Oil Pool, Ky.* —U. S. Geol. Surv., Bull. 471-A; pp. 5-13*; 10c. Abstract in Mining & Engg. World, June22,1912; p. 1306; 500 w; 10c.

Munn, M. J.—*Oil and Gas Development in Knox County, Ky.*—U. S. Geol. Surv., Bull. 471-A; pp. 14-25*; 10c.

Munn, M. J.—*Explorations for Natural Gas and Oil at Memphis, Tenn.*—Resources of Tennesse, Feb.,1912, pp. 48-68*; 35c.

Shaw, E. W.—*New Carlyle Oil District of Southern Illinois;* [Geol. Survey notes].—Mining & Engg. World, Dec.30,1911, p. 1526; 500 w; 10c.

Smith, R.—*Tennessee Oil Fields.*—Manfrrs. Record, Feb.29,1912; p. 55; 1500 w; 25c.

Wheeler, H. A.—*Developments in the Illinois Oil Fields.*—Asso. of Engg. Soc's, Jnl.; Feb.,1912; pp. 68-77; 40c.

Wittich, L. L.—*History of Kansas Oil Development.*—Mines & Minerals, Jan., 1912,p. 384; 300 w; 35c.

Wittich, L. L.—*Petroleum in Oklahoma.*—Mines & Minerals, Dec.,1911, p. 291; 2500 w*; 35c.

———. *Abandoned Indiana Wells:* [From "Petroleum Gazette"].—Well Drillers' News, May.1912; p. 14; 1000 w; 10c.

———. *Detailed County Report on Wirt, Roane and Calhoun Counties.*—W. Va. Geol. Survey, 1911; pp. xx, 573; 3 maps; $2.00 (book).

e SOUTHERN STATES.

Day, D. T.—*Vast Storehouse of Fuel in Southern Petroleum and Natural Gas:* [Discusses resources and possibilities of utilization in Southern states].—Manfrrs. Record, Feb.22,1912; p. 67; 3000 w; 65c.

Reprint in Nat. Gas Jnl., May,1912; p. 205; 35c.

Lucas, A. F.—*Geology of Calcasieu Mines and Sulfur-Oil Fields of the Coastal Plain;* [Address at presentation of Perkins medal to Dr. H. Frasch].—Met. & Chemi. Engg., Feb.,1912, p. 80; 2100 w; 35c. Also in Jnl. of Ind'l & Engg. Chemy, Feb., p. 140; 2800 w; 65c. Also in Soc. of Chem'l Ind'y Jnl.; Feb.29; p. 173; 2000 w; 65c.

Phillips, Wm. B.—*Petroleum in Texas;* [Review for 1911].—E. & M. J., Jan.6,1912. p. 97; 500 w; 25c.

Udden, J. A.—*Oil and Gas Fields of Wichita and Clay Counties, Texas.*—Mining & Engg. World, Apr.6,1912; p. 767; 1000 w; 10c. Also in Nat. Gas Jnl., June,1912; p. 262; 1200 w; 35c.

f ALASKA AND CANADA.

Lakes, A., Jr.—*Oil Signs and Prospects in Colorado and Alberta.*—Canadian Mng. Jnl., Apr.15,1912; p. 271; 1000 w; 25c.

Martin, G. C. and F. J. Katz.—*A Geologic Reconnaissance of the Iliamna Region, Alaska.*—U. S. Geol. Surv., Bull. 485; 1912; pp. 138*; 10c.

Abstract on petroleum resources, in Mng. Sci., Apr.11,1912. p. 332; 1500 w*; 20c.

Scott, J.—*Die kanadische Petroleumindustrie;* [The oil industry of Ontario in 1910; from Petroleum Rev.].—Organ d. . . Bohrtechniker, Feb.1,1912; p. 34; 750 w*; 45c.

———. *Indications of the Occurrence of Oil in Western Canada.*—Mining & Engg. World, March16,1912; p. 600; 500 w; 10c.

———. *Oil and Gas;* [In Alberta, British Columbia, and Katalla, Alaska].—B. C. Mng. & Engg. Record, Oct.,1911, p. 91; 2800 w*; 35c.

———. *Recent Oil and Gas Developments in Ontario.*—Petroleum World, April, 1912; p. 170; 1000 w; 35c.

g LATIN AMERICA AND W. INDIES.

Arnold, R.—*A Petroleum Gas Volcano;* [Upheaval of island near Trinidad oil fields]. Petroleum World, March,1912; p. 129; 1000 w*; 35c.

Abstract in German in Organ d. Bohrtechniker, May1,1912, p. 106; 500 w; 35c.

Brady, A. C.—*Mexico,* 1911.—See Mexico.

Deustua, R. A.—*Estado actual i porvenir de la industria petrolífera en el Perú;* [Present status and future outlook for the petroleum industry of Peru].—Soc. d. Ingrs. (Peru), Bol.; Feb.,1912; pp. 57-90; March, pp. 109-132*; April, pp. —; May, pp. 195-218*; $2.15.

Resumé in English in "Peru To-day." April,1912; p. 25; 3200 w*; 25c.

Garrett, F. C.—*An Examination of Some Bituminous Minerals;* [Chiefly Trinidad petroleums and pitches].—Soc. of Chem'l Ind'y, Jnl; Apr.15,1912; p. 314; 2500 w; tables; 65c.

Gawalowski, A.—*Der Asphalt argentinischer Herkunft;* [Note on a sample of asphalt from the San Juan district, Argentina].—Allgm. Oestr. Chemiker Ztg., March 15,1912; p. 47; 250 w; 45c.

Hornaday, W. D.—*Gulf-Coast and Other Oil Fields of Mexico.*—Mining & Engg. World, Dec.23,1911, p. 1279; 1500 w; 10c. Also in El Paso Mng. Jnl., Jan.,1912; p. 14; 1500 w; 35c.

Longobardi, E.—*Algunas investigaciones*

sobre los petróleos argentinos; [Investigations on the physical and chemical properties and distillation products of Argentina petroleums].—Soc. Cient. Argentina, Anales; Sept.,1911; pp. 119-160; $1.15.

Longobardi, E., and N. Gamus.—*Existencia de vanadio en algunos petroleos argentinos;* [Presence of vanadium in some petroleums of Argentina].—Soc. Cient. Argentina, Anales; Dec.,1911; pp. 283-286; $1.15.

Plotts, Wm.—*Characteristics of Oil Territory in Colombia, S. A.*—Oil Age, Apr.19, 1912; p. 1; 2100 w; 20c.

German abstract in Allgm. Oestr. Chemiker Ztg., July16, p. 109; 1400 w; 45c.

Spellacy, M. A.—*Resume of Operations* [in Tampico oil field].—Oil & Gas Jnl., Jan. 4,1912, p. 14; 2000 w; 20c.

Zelaya, C.—*Petroleum Deposits in Chile.*—E. & M. J., Apr.13,1912; p. 756; 1000 w; 25c.

Reprint in Oil Age, May17, p. 6; 20c.

———. *Argentine Petroleum.*—S. Amern. Jnl., Feb.10,1912; p. 151; 1000 w; 35c.

———. *Eruptivbrunnen auf den Erdölfeldern von Trinidad;* [Gushers of Trinidad oil fields; from Petroleum Rev.].—Organ d. . . Bohrtechniker, Feb.1,1912; p. 31; 1000 w; 35c.

———. *Las companias "Mexicana de Petroleo" y "Huasteca Petroleum Co.";* [The "Mexicana de Petroleo" and "Huasteca Petroleum Co."].—Econom. Mex., May 11,1912; p. 101; 2000 w; 35c.

———. *Les gisements pétrolifères de la Huasteca;* [The Tamaulipas-Vera Cruz oil fields; from French consular report].—Pétrole, Dec.15,1911, p. 4; 500 w; 35c.

———. *Long-Lived Wells;* [Prospects for continuous production from Mexican oil fields].—Los Angeles Mng. Rev., Dec.23, 1911, p. 11; 1000 w*; 20c.

———. *Oil Operations near Tampico.*—Oil Age, May30,1912; p. 10; 750 w; 20c.

———. *Peruvian Oil Fuel in Chile.*—Peru Today, April,1912; p. 45; 500 w; 25c.

———. *S. America in* 1911.—E. & M. J., Jan.6,1912; p. 82; 2000 w; 25c.

———. *Von der Petroleumindustrie Mexikos;* [The Mexican oil industry].—Petroleum, April17,1912; p. 781; 1200 w; 50c.

h RUSSIA.

Craig, E. H. C.—*The Maikop Oil Field; A Review and a Suggestion.*—Mng. Jnl., March30,1912; p. 303; 2400 w; 35c.

de Hautpick, E.—*Ural Caspian Oil Fields.*—Mng. Jnl., Apr.20,1912; p. 375; 1000 w; 35c.

de Hautpick, E.—*Maikop Boring Works in* 1911.—Mng. Jnl., Jan.13,1912, p. 39; 1000 w; 35c.

de Hautpick, E.—*Russian Oil;* [Recent developments].—Mng. Jnl., June1,1912; p. 534; 1000 w; 35c.

de Hautpick, E.—*Russian Oil;* [Baku, Grosny, recent developments].—Mng. Jnl., Apr.6,1912; p. 327; 1000 w; 35c.

de Hautpick, F.—*Maikop;* [Recent developments].—Mng. Jnl., March16,1912; p. 246; 5000 w; 35c.

de Hautpick, E.—*The Kertch Oil Field Failure.*—Mng. Jnl., May25,1912; p. 513; 500 w; 35c.

de Hautpick, E.—*Russian Oil;* [New oil law and 1911 production].—Mng. Jnl., Apr. 27,1912; p. 404; 1000 w; 35c.

Herr, V.—*Untersuchung des Erdöls von Maikop;* [Analysis and tests of the petroleum of the Maikop field; from transactions of the Baku section, Impl. Russ. Techn. Asso., Nos. 5-6, 1911].—Petroleum, Feb.21, 1912; p. 541; 1000 w; 45c.

Seidl, K.—*Die Naphthaindustrie von Baku;* [The oil industry of Baku].—Berg- & Hüttenm, Rundschau, May20,1912; p. 174; 2000 w; 35c.

Simmersbach. —. *Russlands Petroleumindustrie im Jahre,* 1910; [The petroleum industry of Russia in 1910; fields, production, etc.].—Ver. z. Befördg. Gewerbefleiss., Verhandl.; March,1912; pp. 211-217; 75c.

Strischoff, J.—*Geologic structure of the oilfield south of Geran station, Transcaucasion Railroad;* [in Russian].—Ges. d. Naturforscher, Mittlngn.; Vol. 21, 1911; pp. 307-316*. Separately reprinted, Kiew, 1911.

Strischoff, J.—*The Light Oils of the Grosny Oil Field;* [In Russian].—Grosny, 1911; 15 pp.

Strischoff, J.—*Deep Bore-Hole Log in the southern portion of the Grosny Oil Field;* [In Russian].—Grosny, 1911; 12 pp*.

E. G.—*Die Bohrverhältnisse .auf dem Grosny Erdölfelde;* [Drilling practice in the Grosny field; from Neftyanoye Dyelo].—Organ d.. Bohrtechniker, Jan.1,1912, p. 7; Jan.15, p. —; 2500 w; 75c.

———. *Die Erdölfelder von Baku und Grosny;* [The Baku and Grosny oilfields. Russia; from Jnl. du Pétrole].—Allg. Oestr. Chemiker Ztg., Dec.1,1911, p. 179; 1200 w; 45c.

———. *Die Erdöllagerstätten im Uralgebiete;* [The oil pools of the Urals].—Organ d. . . Bohrtechniker, Feb.15,1912; p. 46; 500 w; 35c.

———. *Die Montanindustrie in Russland;* [Mining in Russia; Kuban oil fields].—Montan Ztg., Jan.1,1912, p. 3; 2000 w; 35c.

———. *Die Petroleum Industrie von Grosny* 1912; [Review of petroleum production in the Grosny district, Russia, 1911; from "Neftyanoye Dyelo"].—Allgm. Oestr. Chemiker Ztg., June1,1912; p. 84; 1600 w; 45c.

———. *Die Zukunft der Petroleum Industrie auf Tscheleken;* [Outlook for the petroleum industry of Tscheleken I'd; from Neftyanoye Dyelo].—Allg. Oestr. Chemiker Ztg., Feb.15,1912; p. 27; 1800 w; 35c.

———. *Von den Maikoper Napthalagerstätten;* [Development and status of the Maikop oil field].—Riga Industrie Ztg., Apr. 15,1912; p. 110; 1000 w; 35c.

i MIDDLE AND EAST EUROPE.

Badermann.—*Mineralschätze Rumäniens;* [The mineral resources of Roumania].—Zts. f. Angew. Chemie, March22,1912; p. 576; 1500 w; 50c.

Bartoszewicz, S.—*Galiziens Petroleum Industrie,* 1911; [Petroleum production and industry of Galicia, 1911].—Allgm. Oestr. Chemiker Ztg., Apr.1,1912; p. 54; 500 w; 35c.

Blauhorn, Jos.—*Das Recht der Rohölgewinnung in Oesterreich. II;* [The Laws Covering Petroleum Industry in Austria; Vol. II: Regulations of the Mines Inspection Corps].—Vienna-Berlin; 1911; pp. —; $1.00 (book).

von Eminowicz, W. R.—*Boryslaw-Tustanowicz;* [History of development of Boryslaw-Tustanowicz oil field].—Petroleum, Jan. 17,1912; p. 411; 2000 w; 45c.

Ernö, L.—*Analysen des Szacsal Erdöles;* [Analyses of the Szacsal petroleum,

Hungary].—Allgm. Oestr. Chemiker Ztg., Feb.15,1912; p. 30; 500 w; 45c.

Irescu, M. J.—*Die wirtschaftliche Entwickelung der rumänischen Erdölindustrie;* [Industrial development of the petroleum industry in Roumania]. — Bergwirtsch. Mittlngn., March,1912; pp. 31-40; 75c.

Krantz, Fr.—*Einiges über die galizische Erdölindustrie;* [Description of the petroleum industry of Galicia].—Berg- & Hüttenm. Rundschau, Feb.5,1912; p. 89; 7500 w; 35c.

Neuburger, H.—*Le pétrole en Galicie et les intérêts Français;* [French interests in the oil fields of Galicia].—Pétrole, Dec.1, 1911, p. 1; Dec.15, p. 1; Jan.1,1912, p. 1; Feb.15, p. 10; March1, p. 1; April15, p. 1; 8000 w; $1.

English abstract in Oil Age, March15, 1912; p. 7; 1200 w; 20c.

Preiswerk, H.—*Ueber den geologischen Bau der Region der Schlammvulkane und Oelfelder von Berca und Beciu bei Buzen in Rumänien;* [Geology of the region of mud volcanoes and the oil fields of Berca and Beciu near Buzen, Roumania].—Zts. f. prakt. Geol., Jan.-Feb.,1912; pp. 86-95*; 75c.

Abstract in Petroleum, Apr.3,1912, p. 729; 750 w; 50c.

Sasira, L.—*Valeur commerciale des pétroles de Roumanie par comparison avec ceux des autres pays producteurs;* [The commercial value of Roumanian petroleum and oil products compared with those of other producing countries].—Pétrole, Apr.1, 1912; p. 6; 500 w; 35c.

Schafarzik, F.—*Ueber die wichtigsten Mineralstoffe und Wasserschätze enthaltenden geoligischen Horizonte in Ungarn;* [The more important mineral-bearing and aquiferous formations in Hungary; read to 25th Internatnl. Bohringenieur, etc., Wandersammlung].—Organ d. Bohrtechniker, Dec.1,1911, p. 273; 3600 w*; 35c.

Schwarz, P.—*Germany's Oil Trade.*—Petroleum World, May,1912; p. 205; 1000 w; 35c.

Twite, R. C. N.—*Oil Industry of Roumania.*—Mng. Mag., Dec.,1911, p. 453; 2000 w*; 35c.

Weiss, J. A.—*Ueber die Bohrarbeit in Izaszacsal;* [Borings in the Izas valley oil-gas field].—Organ d. . . Bohrtechniker, Feb. 1,1912; p. 25; 600 w; 45c.

Wiclezynski, M.—*Die Arbeiterwohnungsverhältnisse in Boryslav und Tustanovice;* [The problem of housing labor in the Boryslav and Tustanovice oil fields].—Petroleum, Nov.15,1911, p. 159; 1000 w; 50c.

E. G.—*Ein neues Erdölfeld in südost Galizien;* [A new oilfield in southeast Galicia; Sloboda-Rungorska district, Carpathians].—Allg. Oestr. Chemiker Ztg., Jan. 15,1912, p. 14; 1912, p. 14; 500 w*; 35c.

———. *Das serbische Petroleummonopol;* [The petroleum monopoly in Servia; records, 1902-1910]. — Petroleum, May1, 1912; p. 825; 1000 w; tables; 45c.

———. *Die rumänische Raffinierindustrie,* 1911; [Review of the Roumanian refining industry, 1911; from the London Petroleum Review].—Allgm. Oestr. Chemiker Ztg., May15,1912; p. 79; 600 w; tables; 35c.

———. *Galician Oil Operations in Early Days.*—Oil Age, Feb.9,1912; p. 7; 1200 w; 20c.

———. *Das serbische Petroleummonopol;* [The state petroleum monopoly in Servia]. Petroleum, March6,1912; p. 591; 1000 w; 45c.

———. *Enquete über die Kartellorganisationen in der oesterreichischen Mineralölindustrie;* [Government inquiry on syndicate or trust organizations in the Austrian petroleum industry].—Petroleum, Apr. 3,1912; p. 716; 10,000 w; 50c.

———. *Galizische und Rumänische Erdölstatistik;* [Statistics of Galician and Roumanian oil production, 1911].—Allgm. Oestr. Chemiker Ztg., March1,1912, p. 39; 1000 w; tables; 35c.

———. *Oesterreichische Petroleumindustrie;* [Review of condition of Austrian oil industry, 1911].—Allg. oestr. Chemiker Ztg., Dec.1,1911, p. 180; 600 w; 45c.

———. *Ueber die Organisation des Raffinerie-Verbandes;* [Organization of the oil-refiners' syndicate of Hungary; from "Gazeta Wieczorna"].—Allgm. Oestr. Chemiker Ztg., May1,1912; p. 65; 1300 w; 45c.

SOUTHERN AND WESTERN EUROPE

Booth, W. H.—*Petroleum in England.*—El. Rev. (London), March29,1912; p. 527; 1000 w; 35c.

Galdi, B. and E. Camerana.—*I giacimenti petroliferi dell'Emmilia;* [The Emilia oil fields, Italy; memoir of Geol. Survey of Italy].—Rome,1911; 310 pp.; 127 figs; maps; (book).

Abstract in Rassegna Mineraria, Nov.21, 1911, p. 241; Dec.11, p. 273; 3600 w; 65c.

Smith, J. T.—*Two Oil Finds in England;* [Willesden, London; and Kelham near Newark].—Petroleum World, March,1912; p. 127; April, p. 167; 2500 w; 50c.

Abstract in German in Organ d. Bohrtechniker, June1,1912; p. 129; 1200 w; 45c.

———. *Der Mineralölkonsum Deutschlands;* [Oil consumption of Germany].—Deu Bergwerks Ztg., Apr.3,1912; p. 1; 2000 w; 35c.

———. *Recent Petroleum Discoveries in England.*—Oil Age, March29,1912; p. 7; 1200 w; 20c.

———. *Regolamento sull'industria del petrolio;* [Regulations governing petroleum concessions and locations in Italy].—Rassegna Mineraria, May1,1912; p. 251; 1500 w; 35c.

———. *Zur Frage des Reichspetroleummonopols;* [The question of imperial petroleum monopoly in Germany].—Petroleum, Feb.21,1912, p. 525; March6, p. 589; March 20, p. 651; Apr.3, p. 714; 15,000 w; $1.

k ASIA AND AFRICA.

Capito, —. *The Oil Wells of Assam, Burmah.*—Instn. of Civ. Engrs., Proc., Vol. 185; 1911; pp. 363-378*.

Dominian, L.—*Mining in Turkey in* 1911; [Asia Minor].—M. & S. P., Jan.6,1912, p. 58; 1000 w; 35c.

Eddingfield, F. T.—*Tayabas Oil Fields.*—Mineral Resources of Philipp. I'ds, 1911; p. 64; 1200 w*; 65c.

Finlayson, A. M.—*Labour on the Burmese Oilfields.*—Mng. Mag., Feb.,1912; p. 137; 1800 w*; 45c.

Knox.—*Formosa.*—See under Japan.

Merle, A.—*Explorations minières dans le centre et l'ouest de Madagascar;* [Mining explorations in the center and west of Madagascar].—Paris, 1912. 158 pp*; $2.50; (book).

Noth, Jul.—*Petroleum Vorkommen in Südafrika; Erdgas und Erdöl in Siebenburgen;* [Petroleum in Fixburg district, north of Basutaland, S. Afr.; Natural gas and petroleum in Transylvania; abstracts of

two papers read to Kgl. Ungar. Geol. Ges., March6,1912]. — Organ d. Bohrtechniker, Apr.1,1912; p. 73; 1500 w; 35c.

Read, T.—*Mining in China.*—See China.

Salisbury, G. H.—*American Oil Well Drillers in Burmah;* [Describes oil, oilfields and drilling].—Oil Age, March1,1912; p. 7; p. 40; June21, p. 9; 2000 w; 30c.

———. *Algerian Oil Fields, Ltd.*—Petroleum World, Jan.,1912, p. 56; 2000 w; 35c.

———. *Analyse eines algerischen Erdöles;* [Analysis of Algerian oil].—Allgm. Oestr. Chemiker Ztg., Feb.1,1912; p. 22; 500 w; 45c.

———. *Future of Madagascar.*—Mining & Engg. World, Dec.16,1911, p. 1221; 1000 w; 10c.

———. *Prospecting for Petroleum in West Africa.*—Petroleum Rev., May1,1912; p. —; 1000 w*; 35c.

———. *Petroleum in China.*—Well Drillers' News, March,1912; p. 91; 900 w; 10c.

1 AUSTRALASIA.

See also Shale Oil.

Castle, W.—*Future of Oil in New Zealand.*—Oil Age, March8,1912, p. 1; 1000 w; 20c.

Water Problem in Oil Fields.

Achschunow, N.—*Ueber die Erhärtung des Zementschlammes (Tamponages Zement);* [The hardening of injection cements in shaft sinking and drilling].—Organ d... Bohrtechniker, March1,1912, p. 58; 1000 w; 45c.

Beyschlag, Fr.—*Die Verwässerung des Oelgebietes von Tustanowice;* [Nature of the waters inundating the oil wells of the Tustanowice field.].—Petroleum, Nov.1, 1911, p. 105; 1000 w; 45c.

Fauck, Alb.—*Die Wassereinbrüche in dem Bohrungen von Tustanovice;* [The water inundations in the Tustanovice oil wells; read to Vienna section].—Ver. Bohrtechniker, Organ; Jan.1,1912; p. 3; 1000 w*; 45c.

Melik-Nibaroff, L.—*Beobachtungen über die Erschöpfung der Erdölhorizonte der Parzelle No. 8 (Firma "Runo") auf Bibi-Eibat und die Erklärung ihrer Verwässerung;* [Determination of the water-bearing horizons on Lot 8, Bibi-Eibat district, and the causes of the flooding of the oil wells].—Kaiserl. Russ. Techn. Ges., Bakou section; Trudy No. 5 and 6, 1911; pp. —*; $1. Abstract in German in Petroleum, March20,1912; p. 659; 1000 w; 45c.

Noth, J.—*Das Erdöl- und Erdwachsvorkommen von Boryslav-Tustanovicz in Galizien und die Ursachen der Verwässerung, etc.;* [The oil and mineral wax occurrences, and cause of the flooding of, the Boryslav-Tustanovicz oil field. Galicia; read to Geol. Ges. Wien; abstract].—Organ d. . . Bohrtechniker, March1,1912, p. 49; 4000 w*; 45c.

Pauli, G.—*Abdichten wasserführender Schichten oder dergleichen mittels Betons;* [Cement injection process for shutting off water in drill-holes from water-bearing strata; German Pat. No. 242,339].—Organ d. Bohrtechniker, Apr.15,1912; p. 90; 800 w*; 45c.

Strischoff, J. N.—*Feststellung der Horizonte für Wasserabsperrung in den Sonden vom mittleren Teil des Grosnyschen Erdöldistrikts;* [Determination of the water-bearing horizons to be shut off in the central Grosny oil field].—Kaiserl. Russ. Techn. Ges., Grosny section, Arbeiten, 1911, No. 3; 16 pp.

Abstract in Petroleum, Jan.3,1912; p. 351; 500 w; 45c.

Zuber, R.—*Die Oel- und Wasserhorizonte von Boryslav-Tustanovicz;* [The oil and water horizons of the Boryslav-Tustanovicz oilfield, Galicia].—Petroleum, Feb.7,1912; p. 457; 3500 w*; 45c.

———. *Water in California Oil Fields.*—E. & M. J., March30,1912; p. 644; 500 w; 25c.

Details of Practice at Oil Wells.

Becker, A.—*Gasfänge für Löffel- und Plungerbetrieb;* [Recovery of gas in the oil wells of the Grosny field].—Petroleum, Jan. 3.1912; p. 341; 4000 w*; 50c.

Breitweiser, J. E.—*Origin of Oil Well Names and Terms.*—Oil Age, Jan. 12,1912, p. 6; 1000 w; 20c.

Gassaway, S. G.—*Electric Motors for Oil-Well Service;* [Pumping in California oil fields].—Jnl. of El'y, Power & Gas, Jan.13, 1912, p. 25; 1500 w*; 35c.

Hager, D.—*Gushers vs. Pumping Oil Wells in the United States;* [Reviews average well production].—Mining & Engg. World, March16,1912; p. 606; 500 w; 10c.

Hager, D.—*Some Mechanical Features of an Oil Well;* [Casing in California wells].—Mining & Engg. World, March23,1912; p. 651; 1200 w*; 10c. Reprinted in Oil Age, Apr.5, p. 7; 20c.

Hager, D.—*Method Employed in Operating Pumping Oil Wells* [in California].—Mining & Engg. World, Apr.13,1912; p. 817; 2200 w*; 10c.

Reprinted in Oil Age, May3,1912; p. 2; p. 6; p. 10; 20c.

Hepner, E.—*Vorrichtung zum Absaugen der Gase bei Schöpfsonden;* [Suction device for recovering natural gas from oil-well test holes at Moreni, Roumania].—Petroleum, March20,1912; p. 663; 750 w*; 45c.

Hood, F.—*Leinwebers System der Erdölgewinnung;* [The Leinweber system of oil-well pumping in Galicia; using waste natural gas].—Kohle & Erz, Apr.15,1912; p. 370; 1000 w; 35c.

Menzin, A. L.—*Drilling Boilers in the California Oil Fields.*—Jnl. of El'y, Power & Gas, Jan.20,1912, p. 51; 1000 w*; 35c.

Titus, R.—*Oelförderung aus den Oellagerstätten;* [Methods of obtaining oil from oil wells].—Organ d. Bohrtechniker, Apr. 15,1912; p. 86; 2800 w; 45c.

Werlitz, H.—*Ausnutzung der natürlichen Gase bei der Erdölgewinnung;* [Gas-engines and electric power generation from waste natural gas in the Campina and Moreni oil-fields, Roumania; and on electric drilling].—Ver. Deu. Ingr., Zts., Oct.28, 1911, p. 1807; 5000 w*; 50c.

———. *Ideal Liner and Plunger Pumps for Oil Wells.*—Oil Age, June7,1912; p. 7; 500 w*; 20c.

———. *Wilkinson Patent Connecting Rods and Cages for Oil-Well Pumps.*—Oil Age, May3,1912; p. 7; 1000 w*; 20c.

OIL-WELL DRILLING AND DEEP BORING

See under "Drilling and Boring," Chapter 8.

Transport, Handling, and Storage; Pipe-lines, Reservoirs, Tanks, Cars, Vessels, etc.

Bowie, C. P.—*Pumping California Petroleum;* [Describes pipe-line systems].—Oil Age, Sept.8,1911, p. 6; 1800 w*; 20c. Also in M. & S. P., Sept.2, p. 293; 1800 w*; 20c.

German abstract in Allg. Oestr. Chemiker Ztg., Dec.15, p. 185; 1800 w*; 45c.

Boyce, Wm. A., and S. Fisher.—*Patent Cement Tank for Economical Oil Storage.*—Oil Age, May17,1912; p. 2; 1000 w*; 20c.

Carp, P. P.—*Die Pipe Line Baicoi-Constanza;* [The pipe line from Baicoi to Constanza harbor, Roumania; from Monitr. du Pétrole Roumain].—Allgm. Oestr. Chemiker Ztg., May15,1912; p. 78; 1000 w; 35c.

Flachs, Dr.—*Die Pipeline nach Constanza als wirtschaftlicher Faktor auf dem Europäischen Petroleummarkt;* [The pipe line from the Prahova oil field, Roumania to the seaport of Constanza, and its bearing on the oil industry of Europe].—Allgm. Oestr. Chemiker Ztg., March15,1912; p. 41; Apr. 15, p. 57; 3000 w; 65c.

Flachs, Dr.—*Ueber Benzinexplosionen; ihre Entstehung und Verhütung;* [Benzine explosions, their origin and prevention].—Allg. Oestr. Chemiker Ztg., Jan.15,1912; p. 9; 2000 w*; 35c. Also in Bitumen, Feb. 16, p. 54; 2000 w; 35c.

Ostrander, F. T.—*Transportation and Storage of Petroleum;* [History and present practice].—Oil Age, May30,1912; p. 2; p. 6; June6, pp. 2, 6, 10; 5000 w; 30c.

Steinem, C.—*A Wagon Oil Tank.*—E. & M. J., March9,1912; p. 489; 150 w*; 25c.

———. *Die Frage des Erdölprodukte-Transportes in Rumänien;* [Transportation problem for petroleum products in Roumania].—Allg. Oestr. Chemiker Ztg., Dec. 15,1911, p. 190; 750 w*; 45c.

———. *Die staatliche Erdölbehälter in Kolpiec;* [The government petroleum reservoir at Kolpiec, Austria].—Allgm. Oestr. Chemiker Ztg., Apr.1,1912; p. 55; 500 w; 35c.

———. *Die rumänische Pipe Lines;* [Pipe lines in the Roumanian oil fields; from Monitr. du Pétrole Roumain].—Organ d. Bohrtechniker, June1,1912; p. 131; 500 w; 35c.

———. *Oil Engine for Oil-Tank Steamer;* [Krupp design].—Engnrg., Apr.19,1912; p. 527; 1000 w*; 30c.

———. *Oil Steamer for Gulf Trade;* [SS. "Gulfoil" of Gulf Refg. Co., its construction].—Manfrrs. Record, Feb.1,1912; p. 68; 1000 w; 25c.

———. *Pipe Line Facts;* [Development of pipe line transmission of oil in U. S.].—Oil & Gas Jnl., Feb.8,1912; p. 28; 4500 w; 20c.

———. *Reinforced Concrete Oil Loading Dock;* [1300 ft. dock of Gulf Refg. Co., at Port Arthur, Texas].—Engg. Record, June8,1912; p. 640; 1000 w*; 25c.

———. *Sicherheitstankwagen;* [Büssing safety motor-truck tank wagon].—Petroleum, March20,1912; p. 667; 1200 w*; 45c.

Shale Oil and Oil Shales

Greenway, T. J.—*Tasmanian Oil Shale;* [Methods and expected costs].—Australian Mng. Standd., Feb.8,1912; p. 122; 1800 w; 35c.

Laird, Jas. R.—*Electricity Applied to the Scottish Shale Oil Industry;* [Chiefly in haulage; read to Asso. of Mng. Electr. Engrs., W. of Scotland branch].—Iron & Coal Trades Rev., March15,1912; p. 412; 2500 w*; 30c.

Lakes, A.—*The Canadian Oil Shales and Their Comparison with Some Elsewhere;* [Colorado].—Canadian Mng. Jnl., May1, 1912; p. 314; 1000 w; 25c.

Sneddon, J. B.—*Description of the Aerial Ropeway from the Shale Mines to the Oil Works at Oakbank, Midcalder;* [Read to Mng. Inst. of Scotland; abstract].—Coll'y Guardn., Dec.22,1911, p. 1236; 750 w*; 35c.

British Australian Oil Co.—*Engineers' Report;* [Describes oil-shale industry in New South Wales].—Australian Mng. Standd., Jan.18,1912; p. 55; 2500 w; 35c.

Distillation and Distillation Products.

See also Oil Gas Producers.

See also under "Asphalt and Bitumens."

Calmel, A.—*La formaline et le pétrole;* [Formaline or formaldehyde, and its extraction from petroleum].—Pétrole, Jan.15, 1912; p. 2; 300 w; 35c.

Formenti.—*Industrial Wastes* [In Italian].—See under Waste Disposition.

[Frasch, H.].—*Presentation of the Perkins Medal to Herman Frasch;* [Reviews Frasch's work on de-odorizing of Ontario petroleum and on Louisiana sulfur.]—Met. & Cheml. Engg., Feb.,1912, p. 73; 8000 w*; 35c. Also in Jnl. of Ind'l & Engg. Chem'y, Feb., p. 128-140; 8000 w; 65c. Also in Soc. of Cheml. Ind'y, Jnl., Feb.29, p. 169; 8000 w; 65c.

Freund, M. — *Ueber Petroleumkesselsteine;* [Development and treatment of "scale" in petroleum stills].—Chemiker Ztg., March30,1912; p. 353; 1200 w; 35c.

Golodetz, A.—*Ueber fraktionierte Destillation im Laboratorium und über neue Rektifizierapparate;* [Fractional distillation in the laboratory and some new rectifying apparatus].—Chem. Industrie, Feb. 15,1912; p. 102; March1, p. 141; 9000 w*; 75c.

Halaceanu, C.—*Methode pour établir le prix de revient des differents produits du pétrole;* [Methods of determining the net cost and values of petroleum distillates].—Monitr. du Pétrole Roumain, No. 17-20, 1911; $1.50.

German abstract in Petroleum, Jan.17, 1912; p. 415; 2500 w; 45c.

von Pilat, St.—*Die staatliche Mineralölfabrik in Drohobycz;* [The government oil distillery at Drohobycz, Galicia].—Petroleum, Jan.17,1912; p. 412; 1000 w*; 45c.

Rosenfeld, J.—*Technische Versuche zur Verwertung der aus den Petroleumraffinierien stammenden Rückstände;* [Review of attempts at utilization of waste products and residues of oil refineries].—Monitr. du Pétrole Roumain, No. 26, 1911; pp. —; 75c.

Abstract in Allg. Oestr. Chemiker Ztg., Dec.1,1911, p. 178; 2100 w; 45c.

Titus, R.—*Ein automatischer Separator zur Abscheidung des Wassers aus dem Rohöl;* [Automatic separator of water from petroleum]. — Petroleum, Feb.21,1912; p. 543; 750 w*; 45c.

Wesson, D.—*Bleaching of Oils with Fullers Earth.*—Amer. Inst. Cheml. Engrs., Trans., Val. III, pp. 327-332.

Wiebe, H. F.—*Festlegung der Abmessungen des gläsernen Apparats für kontinuierliche Destillation;* [Determination of the proper dimensions of glass apparatus for continuous distillation].—Petroleum, Jan.17, 1912; p. 403; 1200 w; tables; 45c.

B. H.—*Benzol und Benzin;* [Benzol and benzine].—Kohle & Erz, Feb.26,1912, p. 203; 1000 w; 35c.

———. *Le benzol;* [Benzol, its preparation; from Jnl. du Pétrole].—Echo d. Mines, Dec.11.1911, p. 1273; 1000 w; 35c.

Chemical Technology and Tests.

Breth, F.—*Zur Kenntnis des Transformatorenöles;* [Composition and testing of transformer oil].—Petroleum, Dec.20,1911, p. 290; 1400 w*; 45c.

Edeleanu, Dr.—*Arbeiten der rumänischen Sektion der Internationalen Petroleum-Kommission zur Vereinheitlichung der Untersuchungsmethoden in der Mineralöl-Industrie;* [Report of the Roumanian section of the International Petroleum Commission on Standardizing Testing Methods in the Mineral Oil Industries].—Rumänisch. Geol. Inst., Jahrb., Vol. 3 for 1909; pp. —.

Abstract and review by Dr. Singer, in Petroleum, Dec.20,1911; p. 292; 1000 w; 45c.

Engler, C.—*Die Asphalt-, Teer-, und Paraffin-Dosierung im Erdöl;* [Estimation of asphalt, tar and paraffin in petroleum; from Le Pétrole].—Allgm. Oestr. Chemiker Ztg., March15,1912; p. 46; 1000 w; 45c.

Engler, C. and W. Steinkopf. —*Ueber die Anwesenheit von Cholesterin in Java Erdölen;* [Oppose Koch's views on mode of occurrence of cholesterine in Java petroleum].—Petroleum, Dec.6,1911; p. 205; 2000 w; 50c.

Gill, A. H.—*Gas and Fuel Analysis for Engineers.*—New York, 1911 (6th edition); 139 pp*; $1.25 (book).

Guiselin, A.—*Nécessité de définir la composition des pétroles pours moteurs à explosion;* [The necessity of specifications for the composition of petroles for explosion motors].—Pétrole, Apr.15,1912; p. 2; 2000 w; 35c.

Guiselin, A.—*Définition et spécification des huiles et résidus de pétrole brut pouvant être utilisés comme Combustibles Liquides;* [Definition and specifications for oils and crude-oil residues utilizable as Liquid Fuel; report of national commission of France].—Pétrole, Nov.15,1911, p. 1; Apr.1, p. 3; 4500 w*; 50c.

In German in Allgm. Oestr. Chemiker Ztg., Dec.15,1911, p. 187; 2200 w; 45c.

Lunge and Berl.—*Testing Methods in the Chemical Industries* (in German).—See under Chemistry.

Meissner, W.—*Vergleichende Untersuchungen über den Engler'schen, Redwood'schen und Saybolt'schen Zähigkeitsmesser;* [Comparative tests of the Engler, Redwood and Saybolt viscosimeters].—Chem. Rev. (Fett & Harz), Feb.,1912, p. 30; March, p. 44; 5000 w*; 75c.

Meissner, W.—*Internationale Vereinheitlichung der Zähigkeitsbestimmungen;* [International uniformity in determining viscosity or tenacity in petroleums and derivatives].—Petroleum, Jan.17,1912; p. 405; 1000 w; 45c.

Meyerhein, G.—*Die Veränderlichkeit des Asphaltgehälts dunkler Mineralöle;* [The variation and alteration of the asphalt content of dark petroleums].—Chem. Rev. (Fett & Harz), Feb.,1912; p. 28; 1200 w; 50c.

Pyhälä, E.—*Die Gesetzmässigkeit der Viskosität einiger kaukasischer Erdöle und Erdölderivate bei korrespondierenden Temperaturen und in beliebigen Mischungs-Verhältnissen;* [The possibility of standard laws to determine the viscosity of some Caucasian petroleums and petroleum products at standard temperatures and with any desired mixture relationships].—Petroleum, Dec.6,1912; p. 207-229; 50c.

Pyhälä, E.—*Importance of Colloid Chemistry for the Petroleum Industry;* [Brief summary of paper from the Ztschr. Chem. Ind. Kolloide, 1911, No. 9, pp. 209-216].—Soc. of Chemi. Ind'y, Jnl., Dec.30,1911, p. 1442; 400 w; 65c.

Rakusin, M. A.—*Ueber die vergleichende Zusammensetzung von korrespondierenden Erdölen;* [Comparative compositions of corresponding or similar petroleums].—Petroleum, Dec.20,1911; p. 288; 1000 w; 45c.

Schwarz, F.—*Verfahren zur Bestimmung des Asphaltgehalts von Mineralölen, Erdölpechen, etc.;* [Process of estimating asphalt content of petroleum, oil pitches, etc.].—Chemiker Ztg., Dec.23,1911, p. 1417; 3000 w; 35c.

Singer, Leopold.—*Die Lieferungsbedingungen der Regierung der Vereinigten Staaten für den Kauf von Heizöl und Anleitungen zur Probenahme von Oel und Naturgas;* [Review of I. C. Allen's bulletin on: Specifications for the purchase of fuel oil for the U. S. government, and directions for sampling oil and natural gas; U. S. Bur. Mines, Techn. Paper 3].—Petroleum, Nov.15,1911, p. 153; 5000 w; 50c.

Veitch, F. P., and M. G. Donk.—*Modification of the Herzfeld-Bohme Method for the Determination of Mineral Oil in Other Oils.*—U. S. Bur. Chem'y, Circular 85; 1912; pp. —; 20c.

Wiebe, H. F., and P. Hebe.—*Entflammungspunkte von Leuchtölgemischen;* [Flash points of mixtures of various illuminating oils].—Petroleum, March20,1912; p. 655; 1000 w; 45c.

Wiebe, H. F.—*Zur internationalen Vereinheitlichung der Flammpunktsbestimmungen;* [International uniform standard in determining flash point].—Petroleum, Jan.17,1912; p. 406; 2700 w; 45c.

———. *Rapport sur les travaux de la Commission Internationale pour la définition, la classification et l'étude des dérivés du pétrole;* [Report of International Petroleum Commission, Vienna, Jan.,1912, on the definition, classification and study of petroleum derivatives].—Pétrole, Feb.15,1912, p. 1; 4200 w; 35c.

The same; report of the French national sub-committee.—Pétrole, Feb.15,1912; p. 6; March1, p. 1; 4000 w; 50c.

Uses of Petroleum and Products.

See also Combustion Engines, Chapter 12.

Aston, R. G.—*Oil-Burning Locomotives on the Tehuantepec National RR., Mexico;* [Discusses difficulties overcome in burning Texas fuel oil; read to British Instn. of Mechl. Engrs., Dec.,1911; abstract].—Iron & Coal Trades Rev., Dec.22,1911, p. 1015; 750 w; 35c. Also in Engg., Dec.22, p. 841; 3000 w*; 30c. Also in Canadian Engr., May16,1912, p. 663; 3500 w; 25c.

Bano, L.—*Oil Engines in a Hungarian Municipal Power Plant;* [at Torda, Transylvania; translated from Journal of the Hungarian Soc. of Engrs. & Archts. of Buda-Pesth].—Power, Apr.16,1912; p. 549; 2000 w*; 15c.

Booth, Wm. H.—*Liquid Fuel and Its Apparatus.*—London, 1911; pp. —*; $2.50 (book).

Brislee, F. J.—*An Introduction to the Study of Fuel* [and technical application].—London, 1912; pp. 258; 61 figs.; $2.50; (book).

Bucher, W.—*Untersuchung über die Verbrennung methanhaltiger Gasgemische;* [Researches on the combustion of gas mixtures containing methane].—Berlin, 1912; 45 pp.; 20 figs; $1 (pamphlet).

Butler, E.—*Some Modern Developments*

in Oil Burning Apparatus.—Engg. Rev., Feb.15, p. 329; 3000 w*; 35c.

Day, D. T.—*American Railroad Consumption of Fuel Oil,* 1906-1910; [From U. S. Geol. Survey report].—Oil Age, Jan.19, 1912, p. 1; 750 w; 20c.

Diesel, Rud.—*The Present Status of the Diesel Engine;* [Lecture to Amer. Soc. Mechl. Engrs.; abstract].—Power, May28, 1912; p. 767; 1800 w*; 15c.

Diesel, Rud.—*The Diesel Oil Engine and its Industrial Importance;* [Read to Instn. of Mechl. Engrs., March15,1912].—Engnrg., March22,1912; p. 395; 13,500 w*; 30c. Also in Iron & Coal Trades Rev., March22, p. 450; 6500 w*; 30c. Also in Electrician, March22, p. 966; 3000 w; 35c. Also in Engg. News, Apr.4, p. 645; 7500 w*; 25c. Also in El. Rev. (London), Apr.19, p. 655; 3000 w; 35c.

Dyson, C. W.—*Propulsive Machinery and Oil Fuel in the U. S. Naval Service.*—Engrs. Club of Phila., Proc., Apr.,1912; pp. 68-113*; 65c.

von Eberhardt, Max.—*Erhöhung des Nutzeffektes von Feuerungsanlagen;* [Eberhardt improved oil burner, German patent No. 17,842].—Organ d. Bohrtechniker, March15,1912; p. 61; 1800 w*; 35c.

Hamilton, E. H.—*L'emploi des huiles combustibles en fonderie;* [Use of fuel oil in the foundry].—Echo d. Mines, June3, 1912; p. 654; 500 w; 35c.

Herter, C. H.—*The Cost of Oil Power.*—Power, Feb.20,1912; p. 259; 500 w; 20c.

Hubbard, P.—*Bituminous Roads and Pavements and Their Materials of Construction.*—Franklin Inst.; Jnl.; Apr.,1912; pp. 343-362*; 65c.

Kerr, E. W., and H. A. Nadler.—*Oil Burning Settings; Tests of Different Furnaces and Draft Conditions with Horizontal Tubular Boilers;* [Abstract from Louisiana State Univ. Bull. No. 131].—Practl. Engr., March1,1912; p. 255; 4500 w*; 25c. Also in Engg. News, March28, p. 584; 2000 w; 25c.

McAllister, C. A.—*Economy in the Use of Oil as Fuel for Harbor Vessels;* [Read to Soc. of Naval Arch'ts & Marine Engrs., New York, Nov., 1911; abstract].—Engnrg., Feb.2,1912; p. 164; 1000 w; table; 30c.

Neuburger, H.—*Le nouveau programme de la marine Française;* [New plans of the French navy for using oil fuel].—Pétrole, Dec.15,1911, p. 1; 1400 w; 35c.

German translation in Allgm. Oestr. Chemiker Ztg., July16, p. 109; 1200 w; 45c.

O'Gara, P. J.—*Crude Oil Frost Protection;* [Use in safeguarding orchard soils].—Jnl. of El'y Power & Gas, March16,1912; p. 247; 500 w; 35c.

Percy, E. N.—*Other Industrial Applications of Oil Burning;* [Smelting; lime and cement, brick and refractories manufacture].—Jnl. of El'y Power & Gas, Jan.6, 1912, p. 8; 3000 w*; 35c.

Percy, E. N.—*Oil Burners;* [How to install and maintain burners and furnaces using oil fuel].—Jnl. of El'y Power & Gas, Dec.16,1911, p. —; Dec.23, p. 588; Dec.30, p. 613; Jan.6,1912, p. —; 8,000 w*; $1.10.

Pöhlmann, —. *Neuere Rohölmotoren;* [Some newer types of crude-oil motors].—Dingler's Polytechn. Jnl., Jan.13,1912, pp. —*; Jan.27, pp. 49-51*; Feb.10, pp. 81-87*; Feb.24, pp. 119-121*; March16, pp. 165-167*; March30, pp. 193-197; Apr.13, p. 229-232*; $1.75.

Richard, G.—*Quelques foyers de chaudières au pétrole;* [Summary of the commoner oil-burning systems for boilers].—Rev. de Mécaniq., Jan.,1912; pp. 49-76* 95c.

Roehlike, E. M.—*Ein neues Oel- und Teergas;* [The Rincker and Wolter new gas-producer using petroleum and tar wastes].—Bitumen, March16,1912; p. 85; 1800 w*; 35c.

Smith, A. E.—*California Oil Superseding Coal;* [Use on Pacific and Canadian steamships].—U. S. Consul. Rep., Jan.26,1912, p. 423; 500 w; 20c.

Smith, J. T.—*Oil Fuel for London;* [Problems of requirements, supplies and freights].—Petroleum World, Jan.,1912, u. 43; 1200 w; 35c.

Sonnabend, W.—*Rohölfeuerung in der Eisenindustrie;* [Crude-oil fuel and firing in the iron and steel smelting industry].—Centralbl. d. Hütten & Walzwerke, May25, 1912; p. 270; 2000 w; 45c. Also discussed in Eisen Ztg., June1,1912; p. 401; 1500 w; 35c.

Sussmann, L.—*Oelfeuerung für Lokomotiven;* [Manual of Oil-Firing Practice for Locomotives].—Berlin, 1911; pp. 78; 41 figs; $1.50 (pamphlet).

Ubbelohde, L.—*Zur Theorie der Reibung beschmierter Maschinenteile;* [The theory of friction and lubrication in lubricated machinery].—Petroleum, Apr.17,1912; p. 773; May15, p. 882; June5, p. 938; 10,000 w*; 95c.

Weinstein.—*Die Herstellung und Untersuchung der im Eisenbahnbetriebe verwendeten Petroleumprodukte;* [Production and testing of the petroleum products used in railroading].—Glaser's Annalen d. Gewerbe, May15,1912; pp. 181-184; 75c.

Williams, H.—*Oil-Fire Extinguishers for Naval Vessels.*—Engg. News, May16,1912; p. 921; 1000 w; 25c.

White, R. B.—*Oil Engines and Their Fuels.*—Well Drillers' News, April,1912; p. 2; 2500 w; 20c.

Wolff, G.—*Die gegenwärtigen Beziehungen der Mineralölindustrie zum Automobilismus;* [Present day relations between the petroleum and automobile industries].—Bitumen, Jan.16,1912, p. 18; 4000 w; 35c.

Dr. G.—*Neuerungen in der Oelgaserzeugung;* [Improvements and innovations in oil gas-producers in Germany and America].—Petroleum, May22,1912; p. 831; 3000 w*; 45c.

E. P.—*Die Bedeutung des Masuts für die Erzaufbereitung;* [Significance of the Elmore oil flotation process with regard to the utilization of masut and oil refinery wastes].—Petroleum, May1,1912; p. 831; 3000 w; 45c.

Texas Co.—*Oil Fuel.*—New York, 1912; 149 pp.; $1; (book).

———. *Crude Oil Gas;* [Wisconsin crude-oil gas-producer].—Practl. Engr., March1, 1912; p. 253; 1000 w*; 25c.

———. *Flüssige Heizstoffe;* [Notes on the uses of liquid fuel].—SW. Deu. Industrie Ztg., Jan.30,1912; p. 47; 500 w; 35c.

———. *Oil Burning Under Different Settings;* [Tests on horizontal return-tubular boiler].—Power, Feb.6,1912; p. 181; 1800 w*; 20c.

———. *Oil for Fueling Ships Growing in Favor.*—Coal & Coke Op., May30,1912; p. 340; 750 w; 25c.

———. *Oil vs. Steam Engines;* [Favors oil].—Practl. El'y & Engg., March,1912; p. 313; 1800 w*; 25c.

———. *Ore Haulage by Means of Oil Tractors.*—Mng. Sci., Jan.25,1912, p. 112; 2600 w*; 25c.

———. *Pour et contre le pétrole solidifié;* [Solid oil fuel, pro and con; comparison with liquid oils and coal briquets].—Echo d. Mines, Feb.5,1912; p. 154; 1000 w; 35c.

———. *Progress and Possibilities of Solid Oil Fuel;* [Armstrong-Mordan system].—Oil Age, Dec.22,1911, p. 6; 2500 w; 20c.

———. *Steamless Steamships;* [Discusses "Toiler" and "Vulcanus" and oil-engine vessels].—Mining & Engg. World, Dec.16,1911, p. 1208; 300 w; 10c.

———. *System for Burning Fuel Oil Under Pressure;* [Swarens-Bathurst "Pressure Spray" Atomizer].—Oil Age, Dec.15, 1911, p. 6; 2500 w*; 20c.

———. *The Canadian Pacific Ry.'s Oil-Fuel-Burning SS. "Princess Alice."*—Engnrg., Dec.8,1911, p. 764; 1000 w*; 35c.

———. *The Oil-Engined Ship "Selandia"; Sulzer-Diesel Engines; and Notes on Developments in Marine Oil Engines.*—Engnrg., March8,1912; pp. 315, 317, 321; 4000 w*; 30c. Also in Power, Apr.23, p. 585; 2000 w*; 15c.

———. *The Ocean-Going Oil-Engined Ship "Sembilan."*—Engnrg., March15,1912; p. 348; 1200 w*; 30c.

———. *The Utilization of Crude Petroleum for Electric Power Generation;* [Oil gas-producers and eletricity from gas-engines at Los Angeles, Cal.].—El. Rev. (London., Dec.8,1911, p. 934; 2600 w*; 35c.

Geology and Genesis (General).

For geology of individual fields see under various districts. See also under "Asphalt and Bitumens."

Breger. Carpel.—*The Various Theories of Petroleum Origin.*—Mining & Engg. World. Dec.16,1911, p. 1219; Dec.30, p. 1321; Jan. 13, p. —; 10,000 w; 30c.

Coste, Eug.—*Fallacies in the Theory of Organic Origin of Petroleums.*—Instn. of Mng. & Met'l'gy, Bull. 85, Oct.,1911, pp. 1-18; 17,000 w; 50c. Discussion, Bull., 86, Nov., pp. 15-42; Bull. 87, Dec., pp. 3-31; Bull. 89, Feb.,1912; p. 25-28; $1. Reply to discussion; Bull. 93; June,1912; pp. 59-81; 50c.

Also discussed in Mng. Mag., Nov., p. 343; 1000 w; 35c. Abstract of paper in S. Afr. Mng. Jnl., Nov.4,1911, p. 296; 1500 w; 35c. Also in Mng. Sci., Nov.30, p. 493; Dec.7, p. 515; Dec.14, p. 535; 8000 w; 40c. Also in E. & M. J., Dec.16, p. 1192; 1200 w; 25c.

Engler, C. and E. Severin.—*Katalyse und Erdölbildung;* [Catalysis and the genesis of petroleum].—Zts. f. angew. Chemie, Jan. 26,1912, p. 153; 3600 w; 40c.

Engler, C.—*Das Bitumen;* [Bitumens, their composition, nature and origin].—Chemiker Ztg., Jan.18,1912; p. 65; Jan. 23, p. 82; 6000 w; 35c.

Engler, C.—*Die Bildung der Hauptbestandteile des Erdöls;* [Genesis of the principal components of petroleums].—Petroleum, Jan.17,1912; p. 399; 4000 w; 45c.

Engler, C.—*Die Bildung von Kohle und Erdöle;* [The formation of coal and oil and the energies contained therein].—Organ d. Bohrtechniker, Dec.1,1911, p. 280; 1600 w; 45c.

Hille, F.—*Petroleum;* [Opposes organic theories of origin].—Canadian Mng. Jnl., March1,1912, p. 145; 2700 w; 25c.

Höfer, Hans von.—*Die Temperaturen in den Erdölgebieten;* [Earth temperatures as revealed in oil-well drillings].—Organ d. Bohrtechniker, Dec.1,1911, p. 279; 1600 w; 45c.

Ipatjew, W.—*Der Ursprung des Erdöls;* [Genesis of petroleum; various theories read to Russ. Physik-Chemisch. Ges; German abstract].—Organ d. Bohrtechniker, June1,1912; p. 129; 1000 w; 45c.

Johnson, R. H.—*Additional Factors in the Origin and Accumulation of Oil;* [Reviews factors neglected by Campbell].—Econ. Geol'y, Dec.,1911, p. 808-812; 65c.

Latimer, J. F.—*Origin of Petroleums;* [Opposes Coste's inorganic origin].—Canadn. Mng. Jnl., Jan.1,1912, p. 5; 500 w; 25c.

Oebbecke, K.—*Das Vorkommen, die Beschaffenheit und die wirtschaftliche Bedeutung des Erdöls;* [Origin, occurrence, composition and industrial significance of petroleum].—Ver Deu. Ingr., Zts.; Aug.12, 1911, p. 1313-1318; 50c.

Also in Petroleum, Aug.16, p. 2169; 8200 w; 50c. Also in Chemiker Ztg., July8, p. 744; 750 w; 30c. Also in Allg. Oestr. Chemiker Ztg., Jan.1,1912; p. 1; Jan.15, p. —; 8000 w; 75c.

Ubbelohde, L. and S. Woronin.—*Ueber die Einwirkung von Katalysatoren auf Erdöl;* [Effect of catalyzing agents on petroleum; contribution to the origin of petroleum].—Petroleum, Oct.4,1911, p. 9; 3200 w; Jan.3,1912; p. 334; Jan.17, p. —; 5000 w*; 95c.

———. *Anorganischer Ursprung von Erdöl;* [Inorganic reactions capable of producing petroleum].—Organ d. Bohrtechniker, March15,1912; p. 70; 500 w; 45c.

General and Miscellaneous.

Cabell, R. E.—*Basis for Calculating Special Excise Tax on Corporations* [U. S. tax on oil corporations].—Oil Age, March1,1912; p. 2; p. 5; 2200 w; 20c.

Leis, Jos.—*Aus welchen Gründen empfiehlt sich die Einführung eines Petroleum-Reichsmonopol?* [What are the reasons for a government petroleum monopoly in Germany?].—Petroleum, March20,1912; p. 645; 6000 w; 45c.

Neuberger, H.—*De la Concessibilité du Pétrole en France;* [The dimensions and requirements for petroleum land claims in France and French colonies].—Pétrole, Apr. 1,1912; p. 1; 1500 w; 35c.

Skinner, W. R.—*The Oil and Petroleum Manual;* [Particulars of over 600 companies, directors, engineers, etc.].—London, 1912; 250 pp; $1 (book).

Ubbelohde, L.—*Die Internationale Petroleum Kommission;* [The International Petroleum Commission; organization and aims].—Petroleum, Jan.17,1912; p. 394; 3500 w; 50c.

Ursinus, O.—*Kalendar für Tiefbohr-Ingenieure, -Techniker, -Unternehmer und Bohrmeister; Handbuch für Petroleumfachleute;* [Yearbook for Deep-Drillmen, etc.]. —Frankfurt a.M; 1911; pp. —; 300 figs.; $2.50; (book).

British Patent Office.—*List of Works on Peat, Mineral Oils;* [Bitumens, Asphalts, etc., in the Library].—London, 1911, pp. —; 50c; (pamphlet).

———. *Hauptversammlung der internationalen Petroleumkommission;* [Synopsis of convention proceedings of International Petroleum Commission, Vienna, Jan. 16-22, 1912].—Chemiker Ztg., Feb.15,1912, p. 184; 1000 w; 30c. Also in Petroleum, Feb.7,1912; p. 468-474*; 45c. Also in Zts. f. angew. Chemie, March8, p. 481; 4200 w; 45c. Also in Allgm. Oestr. Chemiker Ztg., May1, p. 66; May15, p. 75; 3600 w; 65c.

———. *Taxation of Oil Properties.*—Oil Age, June7,1912; p. 1; 1100 w; 20c.

NATURAL GAS

Occurrences, Geology

Ammermann.—*Erdgasausbruch bei Neuengamme und seine Bewältigung;* [The natural-gas wells of Neuengamme and their utilization in Hamburg, Germany; read to Alsace-Lorraine branch; abstract].—Ver. Deu. Ingr., Zts., Nov.11,1911, p. 1899; 750 w; 50c.

Bell, W. T.—*Famous Natural Gas Fields;* [Question of exhaustion and deeper gas sands in Appalachian fields].—Petroleum World, Dec.,1911, p. 30; 750 w; 35c.

Binder, O.—*Ueber das Erdgas von Neuengamme;* [Natural gas deposits of Neuengamme near Hamburg].—Chemiker Ztg., Jan.11,1912, p. 48; 400 w; 30c.

Böckh, H. von.—*Ueber die Erdgaseruption bei Kissarmas;* [The natural gas eruption at Kissarmas, Oct.29,1911].—Organ d. . Bohrtechniker, Jan.15,1912, p. 13; 5000 w*; 45c.

Burrell, G. A.—*Characteristics of the Natural Gas Used at Pittsburgh;* [For artificial explosions in government experimental gallery; with notes on analytic methods].—U. S. Bur. Mines, Bull. No. 15; 1912; pp. 63-77; 10c.

Czakó, E.—*Die Naturgase Siebenburgens und die Erdgasquelle von Kissármás;* [Natural gas in Transylvania and the gas springs at Kissármás; abstract from Jnl. f. Gasbeleuchtg., No. 51, 1911].—Petroleum, Feb.7,1912; p. 477; 1000 w; 45c.

Czakó, E.—*Ursprung, Vorkommen und Verwendung der Naturgase;* [Origin, occurrence and use of natural gas; read to Karlsruher Chemische Ges; brief abstract].—Chemiker Ztg., Apr.11,1912; p. 403; 250 w; 25c.

Day, D. T.—*Natural Gas Resources* [And 1910 production; from Mineral Resources, U. S. Geol. Survey].—Oil & Gas Jnl., Jan. 18,1912, p. 8; 3000 w; 20c. Also in Nat. Gas Jnl., May,1912, p. 197; 4000 w; 35c.

German abstract of report on 1910 production.—Allgm. Oestr. Chemiker Ztg., June 15,1912; p. 90; July1, p. 98; 3000 w; 65c.

Day, D. T.—*Vast Storehouse of Fuel in Southern Petroleum and Natural Gas;* [Discusses resources and possibilities of utilization in Southern states].—Manfrrs. Record, Feb.|22,1912; p. 67; 3000 w; 65c.

Reprint in Nat. Gas Jnl., May, p. 205; 35c.

Doss, B.—*Ueber das Dritte und zweite Gasbohrloch auf dem Gute der Gebrüder Melnikow im Gouvt. Samara;* [The third and second natural-gas wells on the Melnikow estate in Samara, Russia].—Annales geol. & Minéralogique de la Russie, Vol. 13, 1911, Nos. 5, 6; pp. 137-146.

Gigli, T.—*Ueber zwei Gasquellen in der Nähe von Pisa;* [Two natural-gas springs near Pisa, Italy].—Chemiker Ztg., May7, 1912; p. 511; 250 w; 30c.

Grow, C. M.—*Southern California;* [Project to pipe natural gas from Midway oil field to San Bernardino district].—Nat. Gas. Jnl., June,1912; p. 261; 600 w; 35c.

Haworth, E.—*Oil and Gas in Mid-Continental Field;* [Review of progress in 1911].—E. & M. J., Jan.6,1912. p. 95; 1500 w; 25c.

von Höfer, H.—*Der Gasausbruch bei Kissármás und die Argille Scagliose;* [The natural-gas eruption at Kissarmas, and history of ancient gas eruptions in Italy and elsewhere in Europe].—Organ d. . . . Bohrtechniker, Feb.1,1912; p. 25; 750 w; 45c.

Munn, M. J.—*Oil and Gas Development in Knox County, Ky.*—U. S. Geol. Surv., Bull. 471-A, pp. 14-25*; 10c.

Munn, M. J.—*Explorations for Natural Gas and Oil at Memphis, Tenn.*—Resources of Tennessee, Feb.,1912, pp. 48-68*; 35c.

Munn, M. J.—*The Fayette Gas Field, Ala.*—U. S. Geol. Survey, Bull. 471-A, 1911, pp. 26-51*; 10c. Abstract in Mining & Engg. World, June22,1912; p. 1304; 1500 w; 10c.

Noth, Jul.—*Petroleum Vorkommen in Südafrika; Erdgas und Erdöl in Siebenburgen;* [Petroleum in Fixburg district, north of Basutaland, S. Afr.; Natural Gas and petroleum in Transylvania; abstracts of two papers read to Kgl. Ungar. Geol. Ges., March6,1912]. — Organ d. Bohrtechniker, Apr.1,1912; p. 73; 1500 w; 35c.

Parks, H. M.—*Resources of Oregon.*—See under Oregon.

Pfeifer, J.—*Beiträge zur Verschliessen von Hochdruckgasbrunnen;* [Control of high-pressure natural-gas wells, and notes on the Kissarmas, Hungary, explosion; read to Ungar. Naturw. Ver., chemisch-mineralog. section, Feb.,1912; brief mention in] Chemiker Ztg., May28,1912; p. 596; 100 w; 35c.

Platz, H.—*Bericht ueber die Excursion nach dem Erdgasgebiet von Kissármás;* [Report on the excursion of the International Congress of Drill Engineers to the Kissarmas natural-gas fields, Transylvania].—Organ d. Bohrtechniker, Dec.15, 1911, p. 285; 3000 w*; 45c.

Udden, J. A.—*Oil and Gas Fields of Wichita and Clay Counties, Texas.*—Mining & Engg. World. Apr.6,1912; p. 767; 1000 w; 10c. Also in Nat. Gas Jnl., June,1912; p. 262; 1200 w; 35c.

Weiss, J. A.—*Ueber die Bohrarbeit in Izaszacsal;* [Borings in the Izas valley oil-gas field].—Organ d. . . Bohrtechniker, Feb. 1,1912; p. 25; 600 w; 45c.

Weymouth, T. R.—*Problems in Natural Gas Engineering.* — Amer. Soc. Mechl. Engrs., Jul., May,1912; 43 pp*; 65c. Abstract in "Power," June18, p. 872; 1000 w; 15c.

Woodruff, E. G.—*Marsh Gas Along Grand River near Moab, Utah.*—U. S. Geol. Surv., Bull. 471-A, 1911, p. 101; 300 w; 10c.

Natural Gas. Asso. of America.—*Seventh Annual Convention and Exhibition, Kansas City, Mo., May,* 1912; [Abstract of proceedings].—Nat. Gas Jnl., June,1912; p. 255; 2500 w; 35c.

———. *Big Gas Wells in Ohio;* [Record of production in 1911].—Natural Gas Jnl., Feb.,1912, p. 52, 53; 1500 w; 35c.

———. *Cleveland's Big Wells.*—Nat. Gas Jnl., June,1912; p. 253; 500 w; 35c.

———. *Découverte de sources de gaz naturel en Transylvanie;* [Natural gas at Kissarmas, Transylvania; from French consular report].—Annales d. Mines (Paris), March,1912; p. 257; 500 w; 65c.

———. *Detailed County Report on Wirt, Roane and Calhoun Counties.*—W. Va. Geol. Survey, 1911; pp. xx, 573; 3 maps; $2.00 (book).

———. *From the Caddo, Louisiana, Field;* [Natural-gas developments].—Nat. Gas Jnl., May,1912; p. 183; 2500 w; 35c.

———. *Medicine Hat and the Canadian Gas Supply.*—Nat. Gas. Jnl., June,1912; p. 251; p. 264; 1000 w; 35c.

———. *Natural-Gas Deposits in Hun-*

gary; [Kissarmas; from London "Times"]. —U. S. Consul. Rep., Jan.27, 1912, p. 447; 250 w; 20c.

———. *Oil and Gas;* [In Alberta, British Columbia and Katalla, Alaska].—B. C. Mng. & Engg. Record, Oct.,1911, p. 91; 2800 w*; 35c.

Extraction and Use.

Becker, A.—*Gasfänge für Löffel- und Plungerbetrieb;* [Recovery of gas in the oil wells of the Grosny field].—Petroleum. Jan. 3,1912; p. 341; 4000 w*; 50c.

Brislee, F. J.—*An Introduction to the Study of Fuel* [and technical application].—London, 1912; pp. 258; 61 figs.; $2.50; (book).

Burke, U. W.—*New System for Generating Gas;* [Booty process using 98% air and 2% gasoline vapor; from U. S. Consul. Rep.].—Mining & Engg. World, May4,1912; p. 949; 300 w; 10c.

Coste, J. H.—*The Calorific Power of Gas.* —London, 1911; 326 pp; $2.25 (book).

Feldmann, K.—*Die Verwertung non Naturgasen durch Verbrennung unter Dampf- und Destillierkesseln;* [Utilization of natural gas as fuel under boilers or oil distilleries in the Drohobycs field].—Petroleum, Dec.20,1911; p. 285; 1500 w*; 45c.

Hepner, E.—*Vorrichtung zum Absaugen der Gase bei Schöpfsonden;* [Suction device for recovering natural gas from oil-well drill holes in Moreni, Roumania].—Petroleum, March20,1912; p. 663; 750 w*; 45c.

Meurer, —. *Das Naturgas, seine Gewinnung und Verwertung im Industriegebiet von Pittsburgh, Pennsylvanien;* [Natural gas; its production and uses in the Pittsburgh district].—Jnl. f. Gasbeleuchtung, Feb.24,1912; p. 180-187*; 50c.

Singer, Leopold.—*Die Lieferungsbedingungen der Regierung der Vereinigten Staaten für den Kauf von Heizöl und Anleitungen zur Probenahme von Oel und Naturgas;* [Review of I. C. Allen's bulletin on: Specifications for the purchase of fuel oil for the U. S. government, and directions for sampling oil and natural gas; U. S. Bur. Mines, Techn. Paper 3].—Petroleum, Nov.15,1911, p. 153; 5000 w; 50c.

Strischoff, J.—*The Utilization of Natural Gas in the Grosny Oil Field;* [In Russian]. —Grosny, 1911; 8 pp.; 3 plates.

Werlitz, H.—*Ausnutzung der natürlichen Gase bei der Erdölgewinnung;* [Gas-engines and electric power generation from waste natural gas in the Campina and Moreni oil-fields, Roumania; and on electric drilling].—Ver. Deu. Ingr., Zts., Oct.28,1911, p. 1807; 5000 w*; 50c.

Weymouth, T. R.—*Problems in Natural Gas Engineering.*—Amer. Soc. Mechl. Engrs. Jnl; May,1912; 43 pp*; 65c.

———. *Average Values of Natural Gas;* [In cents per 1000 cu. ft. in various states in 1909 and 1910].—Nat. Gas Jnl., Apr., 1912; p. 149; 200 w; table; 25c.

———. *Measuring the Flow of Gas from Wells.*—Well Drillers' News, March,1912; p. 94; 500 w; chart; 10c.

Gasolines from Natural Gas.

Allen, I. C. and G. A. Burrell.—*Liquefied Products from Natural Gas; Their Properties and Uses.*—U. S. Bureau of Mines, Technical Paper No. 10; 1912; 23 pp*; 10c. Abstract in Chem'l Engr., April,1912, p. 123; 5500 w; 35c. Also in Nat. Gas Jnl., May, p. 208; 4800 w; 35c.

Sieplein, A. T.—*Properties of Gases and Vapors;* [Read to Natural Gasoline Producers' Asso., Pittsburgh, Jan.,1912].—Oil & Gas Jnl., Jan.25,1912, p. 37; 750 w; 20c.

Snelling, W. O.—*Liquid Gas;* [Casing gasoline at natural gas wells; read to Amer. Chemi. Soc., Pittsburgh section; April,1912].—Nat. Gas Jnl., May,1912; p. 202; 2400 w*; 35c.

———. *Gewinnung von Erdöl aus Erdgas;* [Production of gasoline and oil from natural gas; from Petroleum Review]—May15,1912; p. 77; 1000 w; 35c.

———. *Natural Gasoline Producers Meet;* [Contains summaries of papers by Sieplein, Peterson and others, read at Pittsburgh, Jan.,1912].—Oil & Gas Jnl., Jan.18,1912, p. 6; 2500 w; 20c.

PEAT

Baer, —. *Untersuchung einer Torfgasanlage der Görlitzer Machinenbauanstalt und Eisengiesserei A. G.;* [Report upon tests of a peat producer-gas plant of the Görlitz Machine Works & Iron Co.].—Ver. Deu. Ingr., Zts., Apr.6,1912; pp. 558-562*; 75c. Abstract in Elektrotechnik & Masch-Bau, May 12, p. 403; 500 w; 35c.

Beswick, W.—*Development of Peat Power Plants in Europe.*—Engnrg., Jan.26,1912; p. 127; 1200 w; 30c.

Born, A.—*Kombination von Vergasung und Verkokung von Torf;* [Combination gasification-coking of peat].—Ver. z. Fördg. Moorkultur (Deu.), Mittingn; No. 23, 1911; pp. 470-473*; $1.

Clark and Miller.—*Coastal Plain Province of Virginia.*—See under Virginia.

Croissant, H.—*Wertung der Bayerischen Torflager;* [Possibilities in the utilization of Bavaria's peat deposits].—Bayer. Ind. & Gewerbe Bl., Sept.2,1911; p. 341-343; 75c.

Abstract in Gesundh. Ingr., Dec.23.1911; p. —. Also in Elektrotechnik & Masch Bau, March10,1912; p. 214; 500 w; 35c.

Davis, Chas. A.—*The Uses of Peat for Fuel and Other Purposes;* [Properties and preparation].—U. S. Bureau Mines, Bull. 16; 1911; 214 pp.*; 10c.

Davis, C. A.—*Is Peat an Important Fuel in the United States?* [Abstract; read to Amer. Chemi. Soc., N. Y. section].—Power, Dec.19,1911, p. 915; 2500 w*; 15c.

von Feilitzen, H.—*European Peat Societies.*—Canadian Peat Soc., Jnl.; Feb., 1912; p. 7; 1400 w; 35c.

von Feilitzen, H.—*Zusammensetzung und Düngewert der Torfasche;* [Composition and fertilizer value of the ash of peat fuel]. —Zentralbl. f. Kunstdünger-Ind., March21, 1912; p. 86; 500 w; 35c.

Frank, A.—*Verwertung der Moore durch Gewinnung von Kraftgas und Ammoniak;* [Utilization of peat bogs for power gas and ammonia].—Jnl. f. Gasbeleuchtg., Jan.20, 1912; pp. 49-53; 50c. Abstract in Techn. Blätter, May11, p. 150; 1000 w; 35c.

Haanel, B. F.—*The Peat-Producer-Gas Power Plant at the Government Fuel-Testing Station;* [Körting equipment at Ottawa, Canada; from Canadian Peat Soc., Jnl.].—Canadian Engr., May2,1912; p. 602; 2000 w*; 25c.

Heinz, C.—*Peat Gas-Producer and Peat Gas Engine;* [at Goerlitz machine works, Germany; abstract and translation from Stahl & Eisen, Aug.17,1911, p. 1359].—Met. & Chemi. Engg., May,1912; p. 283; 600 w*; 25c.

Larson, Alfr.—*Aleph Anrep, A Standard-Bearer of the Peat Industry;* [Biographic sketch].—Canadian Peat Soc., Jnl.; Feb., 1912; p. 3; 1800 w*; 35c.

Löbel, Rud.—*Beiträge zur Kenntnis des Torfteers;* [The peat tars].—Hannover, 1911 (Techn. Hochschule dissert.); 44 pp; (thesis).

Mighill, T. A.—*The Recent Development of Peat as a Power Factor.*—Amer. Peat Soc., Trans; Jan.,1912; p. 157; 2000 w; $1.40. Reprint in Chem. Engr., May, p. 177; 2500 w; 35c.

Mjöen, A., and P. Hoering.—*Wissenschaftliche Versuche als Grundlage zur Torfverwertung;* [Some scientific researches as a basis for the industrial application of peat].—Christiania, Norway, 1912; 29 pp; 75c (pamphlet).

Percy, P. C.—*A German Peat Gas Power Plant;* [Heinz producer and Görlitzer engine].—Power, Jan.9,1912, p. 53; 750 w*; 20c.

Philipp, H.—*Availability of Nitrogen in Peat for Agricultural Purposes;* [Reply to J. G. Lipman's 1909 report of N. J. Agric. College Experim. Station].—Amer. Peat Soc., Jnl; Jan.,1912; p. 172; 1200 w; $1.40.

Pinkl, V.—*Die Verwertung von Torf in der Ziegelindustrie;* [Preparation of peat for use in brick burning].—Ton Industrie Ztg., Apr.16,1912; p. 637; 1000 w*; 35c.

Strahl, G.—*Erd-, Mond-, Torf-, Blau-, und andere Gase;* [Natural, Mond, peat, oil and other gases and applicability in gas engines].—S. W. Deu. Industrie Ztg., May28,1912; p. 295; 2000 w; 35c.

Tacke, Br.—*Zur Druckverkohlung feuchten Torfs;* [Carbonization of damp peat under pressure].—Ver. zur Förderung d. Moorkultur (Deutsch), Mittlngn; 1911, No. 21, pp. 429-434; No. 22; pp. 449-450; 75c.

Thackara, A. M.—*Engine Gas from Peat;* [Görlitz generator and engine].—U. S. Consul. Rep., Apr.17,1912; p. 232; 1000 w; 20c.

Thamm, —. *Ueber die für die Zugutmachung des Torfes als Brennstoff verwendeten und vorgeschlagenen Formmaschinen und Pressen sowie Formverfahren;* [The various operating and proposed molding machines and presses for preparing peat for fuel use, with notes on their operation].—Fördertechn., July,1911, p. 138-143*; Aug., p. 166-167*; Sept., p. 182-188*; Oct., pp. 209-212*; Nov., pp. 232-236*; $2.50.

Tomlinson, T.—*Peat as Engine Fuel;* [Read to British Instn. of Electr. Engrs., Dublin, March14,1912].—El. Rev. (London), March22,1912; p. 483; p. 451; 4000 w; 30c. Abstract in Power, May7, p. 660; 1000 w; 15c.

Wielandt. W.—*Dr. Wielandt's Peat Machine;* [Excavator of continuous stripping type].—Amer. Peat Soc., Jnl; Jan.,1912; p. 151; 1500 w*; $1.40. Abstract in Canadian Engr., May23, p. 694; 1300 w*; 25c.

Wolff, Dr.—*Ueber die neueren Bestrebungen zur Gewinnung von Gas und Ammoniak aus Torf;* [Newer developments in gas and ammonia production from peat; read to Ver. z. Fördg. Moorkultur (Deu.); brief abstract].—Chemiker Ztg., May2,1912; p. 496; 500 w; 35c.

British Patent Office.—*List of Works on Peat, Mineral Oils;* [Bitumens, Asphalts, etc., in Library].—London, 1911, pp. —; 50c; (pamphlet).

———. *A Successful Peat-Gas Power Plant in Ireland;* [at Portadown; from "Engineering"].—El. Rev. (London), Dec. 22,1911, p. 1017; 1000 w*; 35c. Also in Power, Jan.23,1912, p. 116; 600 w; 15c. Also in Engr., Dec.8; 1400 w*; 50c. Also in Canadian Peat Soc. Jnl., Feb.,1912; p. 10; 1400 w*; 35c.

———. *Aus der russischen Torfindustrie;* [Status and development of the Russian peat industry in 1911].—Riga. Industrie Ztg., Feb.29,1912; p. 61; 1000 w; 35c.

———. *Die production von Torfdünger in den V. S. A.;* [Production of peat fertilizers in U. S. in 1910].—Zentralbl. f. Kunstdünger-Industrie, Jan.21,1912, p. 18; 200 w; 35c.

———. *Peat Industries, Ltd.;* [Plant near Farnham, Quebec].—Canadian Peat Soc., Jnl.; Feb.,1912; p. 21; 800 w*; 35c.

———. *The Peat Industry in Holland;* [Translated from report of Minister of Agriculture, etc.].—Canadian Peat Soc., Jnl.; Feb.,1912; p. 17; 1000 w*; 35c.

———. *The Peat Industry of Russia.*—Coal Age, Jan.20,1912, p. 477; 300 w; 20c.

CHAPTER VII.—STRUCTURAL MATERIALS; CERAMICS;

Stone, Sands, Gravel

BUILDING STONES

Booker, R. G.—*Developing Georgia Granite.*—Manfrrs. Record, Feb.8,1912; p. 53; 500 w; 25c.

Brackenbusch, L.—*Die technisch nutzbaren Gesteinsarten des Herzogtums Braunschweig;* [The industrially useful rocks of Brunswick, Germany].—Braunschweig, 1911, pp. —; (book).

Burchard, E. F.—*Granites, Marbles and Other Building Stones of the South.*—Manfrrs. Record, Feb.22,1912; p. 59; 4000 w; 65c.

Coons, A. T.—*The Production of Slate in 1911;* [In the U. S.].—U. S. Geol. Surv., Mineral Resources f. 1911, 1912; pp. 19; 10c.

Darras, M.—*La Marbrerie;* [Marble and the Marble Industry].—Paris,1911; pp. —; (book).
Review in Stone Trades Jnl., Feb.,1912; p. 1036; 1600 w; 35c.

Eckel, E. C.—*Building Stones and Clays, Their Origin, Characters and Examination.*—N. Y., 1912; pp. xiv, 264; 37 figs; $3 (book).

Glinzer, Dr.—*Dekoration mit durchscheinendem Marmor;* [Translucent marbles and their lighting for decorative purposes; read to Ver. Deu. Chemiker, Hamburg section].—Zts. f. Angew. Chemie, March1,1912; p. 423; 500 w; 45c.

Hume, W. F.—*The "Alabaster" Quarry of Wadi Assiut;* (Crystalline calcite].—Cairo Scient. Jnl., Apr.,1912; p. 72; 250 w; 65c.

Kynaston, H.—*Building Stone in S. Africa;* [Sandstones and granite, chiefly from Orange Free State quarries; abstract from report of Geol. Survey f. 1910].—Stone Trades Jnl., Feb.,1912; p. 1046; 1200 w; 35c.

Robertson, W. F.—*British Columbia,* 1911.—See under Br. Columbia.

Sederholm, J. J.—*Om de tekniska egenskaperna hos finska graniter;* [The granites of Finnland].—Geol. Kommis. Finland, Geotekn. Mem. No. 8; 1911; 38 pp.; 14 figs.; 50c.

Waterbury, L. A.—*Laboratory Manual for Testing Materials of Construction.*—New York, 1912; 270 pp*; $1.50 (book).

Weston, W.—*The White Marble Quarries of Colorado.*—Mining & Engg. World, Apr. 6,1912; p. 761; 750 w; 10c.

———. *Account of the Numidian Marbles and Onyx* [of western Algeria].—Stone Trades Jnl., April,1912; p. 1102; 3000 w*; 35c.

———. *Quarrying in Finland.*—Stone Trades Jnl., Feb.,1912; p. 1045; 500 w; 35c.

———. *Slate;* [Discusses various varieties].—Slate Trade Gazt., Apr.15,1912; p. 48; 1000 w; 35c.

———. *The Colorado-Yule Marble Property;* [Gunnison county].—Stone Trades Jnl., Jan.,1912, p. 1004; 1200 w*; 35c.

———. *The Decay of Stone and Slate.*—Slate Trade Gazette, March15,1912; p. 28; 1000 w; 35c.

———. *The Stone Trade Between Canada and the U. S.*—Stone Trades Jnl., June, 1912; p. 1174; 2000 w*; 35c.

SANDS; GRAVELS

Barnes Sand & Gravel Co.—*Sand and Gravel Washing Plant near Sargents, Ohio.*—Rock Products, March,1912; p. 3; p. 37; 500 w*; 25c.

Brown, S. H.—*Methods of Washing Sand and Gravel;* [Read to Iowa Asso. of Cement Users].—Iowa Engr., Feb.,1912; p. 154; 1000 w; 25c.

Chapman, C. M.—*Testing Sand for Use in Concrete and Cement Mortar.*—Engg. Record, Apr.27,1912; p. 465; 2800 w; 20c.

Freeman, J. R.; E. E. Free and R. H Gaines.—*A Proposed Study of Concrete Sands; Defective Sands.*—Engg. News, Mav 30,1912; p. 1022; 6000 w; 25c.

Hawkins, C. L.—*The New Sand Drying Plant of the United Railways Co. of St. Louis.*—Asso. of Engg. Soc's, Jnl; Feb., 1912; pp. 61-67*; 40c. Abstract in Engg. News, May2, p. 842; 1000 w*; 25c.

Larned, E. S.—*A Study of Sand for Use in Cement, Mortar and Concrete.*—Asso. of Engg. Soc's; Jnl.; Apr.,1912; pp. 189-204*; 40c.

Rice, S. B.—*A Gravel-Washing Plant for Preparing Railroad Ballast;* [Read to Amer. Ry. Engg. Soc.].—Engg. Record, Apr.6,1912; p. 385; 2400 w*; 25c.

Searle, A. B.—*An Introduction to British Clays, Shales and Sands.*—London, 1912; 464 pp*; $2.50; (book).

Wolf, A.—*Gequetschter Sand, ein vorzügliches Rohmaterial zur Zementwaren-Fabrikation;* [Roll-crushed sand, an admirable material for the manufacture of cement and sandlime products].—Montan Ztg., May 1,1912; p. 162; 750 w*; 35c.

———. *A Portable Gravel Digging and Screening Plant;* [Superior Sand & Gravel Co., Michigan].—Engg. & Contractg., May 29,1912; p. 600; 500 w*; 20c.

———. *Model Plant; Kickapoo Sand & Gravel Co.* [Attica, Indiana].—Rock Produts, March,1912; p. 39; 750 w*; 25c.

———. *Washing Plant* [for sand and gravel, Palmyra, N. Y.].—Rock Products, Dec.,1911, p. 33; 750 w*; 35c.

ROAD METAL; STONE CRUSHING

See also "Crushing," in Chapter 10.

Parks, H. M.—*Road Materials in the Willamette Valley.*—Oregon State Bur. Mines, Bull. No. 1; 1912 (2d edition); 64 pp*; 50c.

Sellards, E. H.—*Roads and Road Materials of Florida.*—Flor. Geol. Surv., Bull. 2; 1911; 31 pp.; 4 plates; 50c.

Siefer, F. M.—*Ballasting with Lava Deposits;* [near Mt. Shasta, Cal.].—Engg. Record, Jan.27,1912, p. 100; 600 w*; 25c.

Snyder, L. C.—*Road Materials and Their Properties;* [From Oklahoma Geol. Survey, Bull. 8].—Mng. Sci., Jan.11,1912, p. 29; 2500 w; 20c.

Traylor, S. W.—*The Largest Single-Unit Crushing Plant;* [Blake jaw-crushers and rolls to prepare concrete at Kensico dam, N. Y.].—Mng. & Engg. World, Feb.24,1912; p. 451; 3000 w*; 10c. Also in Engg. News, Feb.22, p. 335; 2600 w*; 25c. Also in M.

& S. P., Feb.24, p. 310; 2500 w*; 20c. Also in Engg. Record, Feb.24, p. 216; 1800 w*; 25c. Also in E. & M. J., March2, p. 450; 1800 w*; 25c.

U. S. Office of Public Roads.—*Some Cost Data on Gravel Road Construction.*—Engg. & Contractg., Feb.21,1912; p. 214; 750 w; 20c.

———. *Cost of Crushing Rock at the Pacoima Quarry of the Los Angeles Highway Commission;* [From the commission's report for 2d semester, 1911].—Engg. & Contractg., May1,1912; p. 494; 750 w; 20c.

———. *Ein Backensteinbrecher von grosser Leistungsfähigkeit;* [Description of new monster stone crusher of Friedrich & Co., Leipzig].—Dingler's Polytechn. Jnl., Feb.3,1912, pp. 74-77*; 50c.

———. *Methods Employed by the New York State Highway Department in Testing Road Stone and Bituminous Materials.*—Engg. & Contractg., Dec.20,1911, p. 662; 3000 w; 25c.

———. *New York State Highways;* [Includes notes on use of gravel and stone and crushing equipment].—Municipal Jnl., May16,1912; p. 739-750*; 25c.

———. *Paving in* 1911; [Official statistics for over 500 American cities].—Municipal Jnl., March21,1912; p. 426-445; 25c.

QUARRYING; STONE CUTTERS

See also under "Drilling and Boring" (Mechanical Cutters) for stone channelers, saws, etc.

———. *Aerial Ropeway for a Shropshire Quarry.*—Stone Trades Jnl., March, 1912; p. 1070; 3500 w*; 35c.

———. *Electrical Plant at the Buxton Lime Firms' Quarries;* [Derbyshire].—El. Rev. (London), Jan.12,1912, p. 59-63*; 3000 w; 35c. Also in Stone Trades Jnl., April; p. 1105; 3000 w*; 35c.

———. *Machine for Cutting Granite Cubes for Paving.*—Engg. News, March28, 1912; p. 614; 1000 w*; 25c.

———. *The Electrical Motor in Stone Yard;* [In cranes, and in stone saws].—Stone Trades Jnl., June,1912; p. 1170; 500 w*; 35c.

Lime; Cements; Concrete

CEMENT MILLS AND MILLING; KILNS; RAW MATERIALS

For Dust Problem in Mills see also under "Sanitation, etc., in Milling and Metallurgy."

Baumgartner, H. W.—*Directory of Portland Cement Manufacturers, together with Manufacturers of Gypsum and Lime,* 1912. —Chicago, 1912; 250 pp*; $1; (book).

Bergquist, J. G.—*Methods and Appliances for Prevention of Accidents in Cement Plants.*—Rock Products, Apr.,1912; p. 33; p. 45; 2500 w*; 30c.

Boyrie, H. E.—*Utilizing Waste Heat of Rotary Kiln.*—Cement Age, Dec.,1911, p. 268; 2000 w*; 25c.

Dannasch, H.—*Die Bewertung der Säcke in der Bilanz;* [The allowance for sacks in weighing Portland cement].—Ton Industrie Ztg., June1,1912; p. 885; 1200 w*; 35c.

Cartiaux, J.—*Températures observées aux fours à ciment au moyen du pyromètre optique de Wanner;* [Temperatures observed in cement ovens with the Wanner optical pyrometer].—Rev. d. Matériaux, Nov.,1911, p. 201; 750 w; 65c.

Darras, M.—*Méthode d'exploitation des carrières de pierres à ciment* [Glory-hole method of limestone quarrying at plant of Washington Portland Cement Co., state of Wash.].—Rev. de Matériaux, Feb.,1912; p. 20; 2000 w; 65c.

Fiebelkorn, Dr.—*Ciment indécomposable;* ["Indecomposable" cement of the Pavin de Lafarge works in south France].—Ton-Industrie Ztg., Dec.2,1911, p. 1698; 1000 w; 35c.

Gramm, K.—*Die Portlandzementfabrik Elm;* [The Elm, Germany, Portland cement works].—Ton-Industrie Ztg., Feb.17,1912, p. 270; 1600 w*; 25c.

Heinly, B. A.—*A Municipal Cement Mill;* [Los Angeles plant at Monolith, Cal., manufacturing tufa cement].—Municipal Jnl., other materials].—Ton Industrie Ztg., March30,1912; p. 557; May18; p. 825; 3600 w; 30c.

Hirschberg, C. A.—*Winter Operations in a Quarry;* [Electric air drilling at Buffalo Cement Co. plant, N. Y.].—Compr. Air Mag., June,1912; p. 6449; 1200 w*; 25c.

Kühl, H.—*Deans Tonkontrolle für Zementfabriken;* [Notes on Dean's paper on clay control for cement works].—Ton-Industrie Ztg., Feb.10,1912, p. 227; 250 w; 25c.

Kutschera, J. — *Drehrohrofen- und Schachtofenbrand;* [Comparisons of shaft-furnace and rotary-oven cements].—Ton-Industrie Ztg., Feb.10,1912, p. 225; 1500 w; 30c.

Laucks, I. F.—*The Geology of Portland Cement Materials;* [From "Pacific Builder & Engr."].—Cement Age, Dec.,1911, p. 258; 1000 w; 25c.

Monkowsky.—*Ueber die Erzeugung von Portland Zement am Schwarzen und Asowschen Meere;* [Cement plants and portland cement industry along the shores of the Black and Azow Seas].—Riga. Industrie Ztg., March31,1912; p. 85; 1000 w; 35c.

Percy, E. N.—*Other Industrial Applications of Oil Burning;* [Smelting; lime and cement, brick and refractories manufacture].—Jnl. of El'y, Power & Gas, Jan.6, 1912, p. 8; 3000 w*; 35c.

Ruggles, W. B.—*The Plant of the Crescent Portland Cement Co.;* [Wampum, Penn.].—Cement Age, Dec.,1911, p. 264; 2000 w*; 25c.

Schott, O.—*Drahtverschluss für Zementsäcke;* [Wire bag-closing device for cement sacks].—Ton-Industrie Ztg., Feb.3,1912; p. 187; 1200 w*; 30c.

Schott, O.—*The Dust Problem in Portland Cement Plants and its Solution;* [Read to Amer. Soc. Mechl. Engrs., Dec.,1911].—Engg. News, Jan.18,1912, p. 110; 5000 w; 25c.

Struckman, H.—*Wet or Dry Processes for Cement Manufacture;* [From Amer. Soc. Mech. Engrs., Jnl.].—Cement Age, Dec., 1911, p. 274; 1000 w; 25c.

Sturtevant, L. H.—*Cement Grinding.*—Met. & Chemi. Engg., June,1912; p. 380; Cement, Apr.,1912; p. 351; 2000 w*; 30c. Also in Met. & Chemi. Engg., June,1912; p. 380; 2000 w*; 35c. Also in Rock Products, June,1912; p. 39; 2000 w; 30c.

Tressont, G.—*Le controle des matières premières pour la fabrication du Portland artificial;* [The control of raw materials for Portland cement manufacture].—Rev. d. Matériaux, May,1912; p. 57; 2000 w; 65c.

Tressont, G.—*Fabrication de ciment portland. Cas de matières premières riches en alumine. Moyens de combattre l'expansion;*

[Cement manufacture; materials rich in alumina; methods of combatting expansability].—Rev. d. Matériaux, March,1912; p. 25; 1500 w; 65c.

Van Zandt, P. C.—*Problems Involved in the Selection of Machinery for the Manufacture of Portland Cement;* [Crushing and grinding equipment; rotary kilns].—Engg. News, Dec.14,1911, p. 700; 6000 w*; 25c.

Van Zandt, P. C.—*Glory-Hole Quarrying Process;* [Washington Portland Cement Co. quarries].—Cement Age, Dec.21,1911, p. 244; 1500 w*; 35c.

———. *Bei der Zementbaugesellschaft in Genthin;* [Trip to the cement-tile and pipe works in Genthin, Germany].—Ton-Industrie Ztg., Feb.17,1912, p. 274; 500 w*; 20c.

———. *British Methods of Manufacturing Portland Cement Compared with U. S.*—Rock Products, March,1912; p. 31; 2000 w; 25c.

———. *Das neue Portlandzementwerk der Coltness Iron Co.;* [The new Portland slag cement plant of the Coltness Iron Co., Ltd., Newmains, Scotland].—Ton Industrie Ztg., June1,1912; p. 884; 600 w*; 30c.

———. *Decision on the Hurry-Seaman Patent on the Use of Powdered Coal Fuel in Rotary Cement Kilns.*—Engg. News, Jan. 25,1912, p. 181; 600 w; 25c.

———. *Die Gigantmühle;* [Bradley giant mills in cement industry in America and Europe].—Ton-Industrie Ztg., Feb.3,1912; p. 186; 400 w; 30c.

———. *Die neue Zementfabrik in Rüdersdorf;* [The new cement mill at Rüdersdorf, Germany].—Ton Industrie Ztg., May18,1912; p. 832; 600 w; 30c.

———. *Electric Operation of German Cement Factories;* [Bonner works near Obercassell].—Cement Age, March,1912; p. 134; 1000 w*; 35c.
In German in Ton-Industrie Ztg., March 23, p. 515; 1000 w*; 35c.

———. *Great Mill of Modern Design;* [Ogden Co. cement plant, Brigham, Utah].—Rock Products, Jan.,1912, p. 34; 1200 w*; 30c.

———. *New Cement Plants at Trident, Montana, and Mason City, Iowa.*—Cement Age, Dec.,1911, p. 263; 1100 w*; 25c.

———. *Puzzuolan Cements for the Periyar and La Boquilla Dams, Mexico.*—Engg. & Contractg., May22,1912; p. 567-569; 1400 w*; 20c.

———. *The New Tidewater Portland Cement Plant at Union Bridge, Maryland.*—Engg. Record, Apr.13,1912; p. 410; 3000 w*; 30c.

———. *Universal Portland Cement Co. Plant No. 6;* [Buffington, Indiana].—Cement Age, Dec.,1911, p. 260; 1500 w*; 25c.
Abstract in French in Rev. d. Matériaux, Feb.,1912, p. 13; 1500 w*; 65c.

SLAG AND IRON CEMENTS

Bates, P. H.—*The Present Status of Iron Ore Cement;* [Cements substituting iron oxide for part of alumina; read to 8th convention Natnl. Asso. of Cement Users].—Engg. Record, Apr.20,1912; p. 433; 1500 w; 20c.

Fleissner, H.—*Eisenhochofenschlacken, ihre Eigenschaften und ihre Verwendung;* [Blast-furnace slags, their properties and uses].—Halle, 1911; pp. —*; (book).
Extracts on slag-cement industry.—Stahl & Eisen, Feb.8,1912, p. 224-231; 5000 w*; 75c. Extract on slag composition in Oestr. Zts. f. Berg & H- wesen, Jan.20,1912; p. 29; Jan.27, p. 46; 8000 w*; 65c.

Guttmann, A.—*Fünfzig Jahre gekörnte Hochofenschlacke;* [Blast furnace slags, their composition and review of 50 years' developments in their ultilization as cement].—Ton Industrie Ztg., May4,1912; p. 752; 1500 w; 35c.

Kühl, H.—*Die Fabrikation des Portlandzementes aus Hochofenschlacke;* [Manufacture of Portland cement from blast-furnace slag].—Chemiker Ztg., Dec.14,1911, p. 1886; 1100 w; 30c.

Skinner, R. P. and others.—*Cement and Ferro-Concrete;* [Portland-cement, slag-cement, concrete and allied developments in Germany, Italy, Austria, Turkey, Zanzibar, S. Africa, China, Burma, Siam, Straits Settlements, Philipp. I'ds., N. Zealand, Chile; series of consular reports].—U. S. Consul. Rep., Jan.3,1911, pp. 17-30; 20c.

TESTS; SETTING; PROPERTIES OF CEMENTS

Achscharumoff, N.—*Ueber Zusätze von Calciumchlorid und Salzsäure zum Portlandzementklinker bei dem Vermahlen desselben;* ["Tamponage" cement and the addition of calcium chloride and muriatic acid to cement clinker during grinding].—Riga Ind. Ztg., Feb.29,1912; p. 52; 1800 w; 35c.

Achschunow, N.—*Ueber die Erhärtung des Zementschlammes (Tamponages Zement);* [The setting of injection cements in shaft sinking and drilling].—Organ d. . . Bohrtechniker, March1,1912, p. 58; 1000 w; 45c.

Burchartz, H.—*Abnutzbarkeit von Zement und Zementmörtel;* [Tests of tensile strength and wearing power of cements and cement mortars].—Ton-Industrie Ztg., March23, 1912; p. 513; 1000 w*; 25c.

Burchartz, H.—*Abnutzbarkeit von Zement und Zementmörtel;* [Tests of tensile strength and wearing power of cements and cement mortars].—Ton-Industrie Ztg., March23,1912; p. 513; 1000 w*; 25c.

Feret and Bied.—*La méthode Le Chatelier;* [The Le Chatelier hot-water test; discussion before International Asso. f. Testing Materials, Jan.,1912].—Rev. d. Matériaux, March,1912; p. 29; 4000 w*; 65c.

Force, H. J.—*Autoclave Boiling Test for Cement.*—Engg. News, June13,1912; p. 1111; 6000 w*; 25c.

Gano, Wm. P.—*The Boiling and Steam Tests of Cement.*—Engg. News, May23, 1912; p. 980; 1000 w*; 25c.

Grut, T.—*Die La Chatelier Probe;* [The Le Chatelier Test].—Ton-industrie Ztg., Dec.23,1911, p. 1809; 1500 w; 35c.

Hentschel, G.—*Das Umschlagen von Portlandzement;* [The setting of Portland cement; effect of alkaline carbonates and other materials].—Ton Industrie Ztg., May 18,1912; p. 825; 2500 w; 30c.

Hentschel, G.—*Das Umschlagen von Portlandzement;* [Controlling and altering the setting time of Portland cement].—Ton-Industrie Ztg., March30,1912; p. 557; 1000 w; 30c.

Hentschel, G.—*Eine abgeänderte Zementkochprobe;* [Modification of the Michaelis heating test for cement].—Ton-Industrie Ztg., Dec.30,1911, p. 1821; 300 w; 25c.

Kasai, S.—*Portlandzement und Puzzolanzusatz. Ein Beitrag zur Meerwasser Frage;* [Portland cement and puzzolan addition; with special reference to the durability in sea water].—Berlin, 1911; pp. —; $1.75 (book).

Kleinlogel, A.—*Festigkeiten nach den*

alten und neuen Zementnormen; [Tensile and compressive strength according to the old and new German standard specifications for cement].—Ton-Industrie Ztg., Jan.20, 1912; pp. 110; 500; 25c.

Kühl, Hans.—*Zur Ehrenrettung der Zementkochprobe nach Michaelis;* [Accelerating time-resistance tests of cements; hot-water tests of Michaelis].—Ton-industrie Ztg., Nov.11,1911, p. 1576; 2800 w; 30c.

Discussion of the above by O. Strebel.—Ton-industrie Ztg., Dec.9,1911, p. 1733; 2100 w; 35c.

Lunge and Berl.—*Testing Methods in the Chemical Industries* (in German).—See under Chemistry.

Markus, O.—*Ueber Schnellbinder;* [The "rapid setter" for cement].—Ton-Industrie Ztg., Dec.30,1911, p. 1826; 1000 w; 25c.

McKenna, C. F.—*Hardness of Plasters and Cements, and a Simple Chronographic Apparatus for Recording Set;* [Read to Amer. Inst. of Chemi. Engrs.].—Met. & Chemi. Engg., Feb.,1912, p. 82; 2400 w*; 35c. Also in Cement, Jan.,1912; p. 241; 2400 w*; 30c. Also in Jnl. of Ind'l & Engg. Chem'y, Feb.,1912, p. 110; 2800 w*; 65c. Also in Cement Age, Feb.,1912, p. 88; 2500 w*; 25c.

Meyer, F. M.—*Die Theorien der Erhärtung der hydraulischen Bindemittel, geprüft an den neuesten Beobachtungen;* [The theories, old and new, of the hardening of hydraulic cements, in the light of latest observations].—Zts. f. angew. Chemie, Apr. 12,1912; p. 711; 6000 w; 35c.

Michaelis, Wm., sr.—*Der Erhärtungsprozess der kalkhaltigen hydraulischen Bindemittel;* [The setting process in calcareous hydraulic cementing compounds].—Dresden, 1911; pp. —; $1; (book).

Michaelis, Wm., sr.—*Der Erhärtungsprozess der kalkhaltigen hydraulischen Bindemittel;* [The setting process in calcareous hydraulic cementing compounds].—Dresden, 1911; pp. —; $1; (book).

Reprint in Ton-Industrie Ztg., May11, p. 793; 1000 w; 35c.

Morse, C. A.—*Five-Year Tests on Cement Briquettes Showing Decrease in Tensile Strength.*—Engg. News, March14,1912; p. 470; 500 w*; 20c.

O'Hara, J. M.—*Retrogression in Tensile Strengths of Cement;* [Read to Amer. Soc. of Civ. Engrs.; abstract].—Canadian Engr., Jan.4,1912, p. 109; 500 w; 25c.

Stratton, S. W. (U. S. Bureau of Standards).—*New Portland Cement Specifications;* [Required by U. S. Government departments].—Municipal Jnl., May30,1912; p. 827; 3000 w; 25c. Also in Chemi. Engr., May,1912; p. 180; 2500 w; 35c. Also in Cement, April, p. 331; 8500 w*; 30c.

Tressont, G.—*Méthode simple pour la détermination rapide du poids spécifique du ciment;* [Simple method for rapid determination of specific gravity of cement].—Rev. d. Matériaux, March,1912; p. 33; 150 w; 65c.

———. *Die Le Chatelier-Probe;* [Discussion of the Le Chatelier test].—Ton-Industrie Ztg., 1911, No. 152, p. 1809; No. 153, p. 1827, 1912; No. 3, p. 33; No. 12, p. 149; 2500 w; 75c.

CONSTITUENTS AND CHEMISTRY OF CEMENTS

Asch, W. and D.—*Die Silicate in chemischer and Technischer Beziehung;* [The silicates in their chemical and technical relations; and the Hexite-Pentite Theory and its Bearing on Stereochemistry].—Berlin, 1911, p. 409; $5.00 (book).

Blount, B.—*The Institute of Chemistry of Gt. Britain and Ireland: Lectures on Cement.*—London, 1912; 64 pp; $1 (pamphlet).

Calame, Dr.—*Die Eisenbestimmung im Portlandzement;* [Determination of iron in Portland cement].—Ton-Industrie Ztg., Feb. 29,1912, p. 358; 1400 w; 25c.

Carpenter, R. C.—*Investigation Respecting the Adulteration of Portland Cement.*—Sibley Jnl. of Engg., Dec.,1911, pp. 127-142; 2800 w; 35c. Abstract in Engg. News, Jan.18,1912; p. 94; 1800 w; 25c. Also in Cement, Feb.,1912; p. 288; 2000 w; 30c.

Cartiaux, J.—*Recherche des matières étrangeres additionnées au ciment;* [Investigation of foreign matters added to cement].—Rev. d. Matériaux, Nov.,1911, p. 198; 2500 w; 65c.

Jänecke, E.—*Zur Frage der Konstitution der Portlandzementklinker;* [The constitution of Portland cement clinker].—Zts. f. anorgan. Chemie, Vol. 73, No. 2, 1911, pp. ——; 75c.

Abstract in Chemiker Ztg., 1911, p. 1289; 2700 w; 30c. Also in Ton-Industrie Ztg., Jan.13,1912, p. 71; 2700 w; 30c.

Kiefer, H. E.—*Free Lime in Portland Cement.*—Jnl. of Ind'l & Engg. Chem'y, May, 1912; p. 358; 3300 w; 65c. Also in Chemi. Engr., June, p. 219; 3500 w; 35c.

Kühl, H.—*Kalk und Gipstreiben;* [Lime and gypsum in cement and the problems of cement composition, hydration and setting; read to Ver. Deu Portlandzementfabrikanten].—Ton Industrie Ztg., May11,1912; p. 789; 4000 w; 35c.

Moye, A.—*Technische Anwendungen der physikalischen Chemie; Tonwaren, Kalk, Gips, Cement;* [Technical applications of physical chemistry in the ceramic arts, lime, gypsum and cement].—Ton-industrie Ztg., March2,1912: p. 373; 2400 w; 25c.

Wiley, C. N., and W. A. Ernst.—*Scheme for the Rapid Analysis of Cement.*—Jnl. of Ind'l & Engg. Chem'y, Aug.,1911, p. 551; 1800 w*; 65c.

Abstract in Mining & Engg. World, Oct. 28, p. 865; 1300 w; 10c. Also in Cement, November,1911, p. 190; 1300 w; 30c.

———. *Some Methods of Analysis Used in the Laboratories of the Armour Institute of Technology;* [Limestone, cement].—Chemi. Engr., Apr.,1912; p. 148; 1800 w*; 35c.

———. *Ueber den Alit im Portlandzement;* [Alite and the problem of Portland-cement composition].—Riga. Ind. Ztg., Dec. 31,1911; p. 379; 600 w; 35c.

PRODUCTION; STATISTICS; TRADE

Burchard, E. F.—*Portland Cement Production in* 1911; [By states; preliminary Survey figures].—M. & S. P., March2,1912; p. 342; 200 w*; tables; 15c. Also in Mining & Engg. World, March9, p. —; 1000 w; tables; 10c. Also in Cement, Feb., p. 279; 1000 w; table; 30c.

Eager, E., N. Ifft, and H. L. Spahr.—*Competitive Markets for Cement; Westphalian, Nuremberg and Silesian Cement Industry in Germany.*—U. S. Consul. Rep., Apr.24,1912; p. 321; 1000 w; 20c.

Franchet, L.—*Les ciments de l'Isère; le nouveau gisement de calcaire de Noyarey;* [Cement resources of Isère, France].—Rev. de Matériaux, Feb., 1912; p. 25; 1000 w*; 65c.

Maynard, T. P.—*Portland Cement and Coal Resources of the Southern States.*—Amer. Mng. Congr., 1911; Proc., Vol. 14; pp. 208-213.

Nicholson.—*Cuba as a Mining Country.*—See under Copper.

Schott, O.—*Die Zementausstellung in New York;* [The cement exhibitions in New York].—Ton-Industrie Ztg., March16,1912; p. 469; 2500 w*; 25c.

Schott, Otto.—*Die Zementindustrie in den Vereinigten Staaten von Amerika;* [The cement industry in the U. S.].—Ton-industrie Ztg., Dec.9,1911, p. 1731; 1800 w; 35c.

Schott, Otto.—*Vital Question of Cement Industry;* [Discusses American over-production and low prices; read to Asso. of Amer. Portl. Cement Mnfrrs.].—Rock Products, Dec.,1911, p. 50; Feb.,1912; p. 55; March, p. —; 5000 w; 60c.

Schott, O.—*Export Markets for American Cement.*—Cement Age, Feb.,1912; p. 93; 1200 w*; 25c.

U. S. Bureau of Statistics.—*Cement Production, Consumption, Imports and Exports;* [1911 in U. S.].—Mining & Engg. World, June15,1912; p. 1252; 1000 w; 10c.

———. *Cement Industry;* [Review of production and the industry in U. S. and in European countries in 1910].—Cement Age, Dec.,1911, p. 235; 5000 w; 35c.

———. *Die deutsche Zementindustrie im Jahre,* 1911; [Review of German cement industry in 1911].—Ton-Industrie Ztg., Jan. 13,1912, p. 65; 2000 w; 30c.

———. *The British Cement Industry.*—Indian & Eastn. Engr., Jan.,1912; p. 8; 1000 w; 65c.

———. *The Cement Industry;* [Brief review for 1911].—E. & M. J., Jan.6,1912, p. 40; 500 w; 25c.

———. *The German Portland Cement Industry.*—Indn. & Eastn. Engr., Jan.,1912; p. 29; 3000 w; 65c.

TEXT BOOKS; GENERAL WORKS

Bishop, J. C.—*A Summary of Recent Investigation of Portland Cement;* [Read to Cornell Univ. student branch of Amer. Soc. of Mechl. Engrs.].—Sibley Jnl., May,1912; pp. 345-355*; 35c.

McKenna, Chas. F.—*The Evolution of Portland Cement Processes.*—Amer. Inst. Cheml. Engrs., Vol. III, p. 91-107.

Meade, R. K.—*Portland Cement; Its Composition, Raw Materials, Manufacture, Testing and Analysis.*—Easton, Penn.; 1911 (2d edition); 512 pp*; $4.50 (book).

Schott, O.—*Production and Testing of Portland Cement* [in America; read to Asso. of German Mnfrs. of Portland Cement, Feb., 1911].—Cement Age, Aug.,1911, p. 54; Dec., p. 252; 7000 w; 40c.

CEMENT PIPE AND TILE

Anderson, A. O.—*Failures of Drain Tile in Iowa and Their Prevention;* [Read to Iowa Asso. of Cement Users].—Iowa Engr., Feb.,1912; p. 146; 3500 w; 25c.

Kaufman, G.—*Advantages and Durability of Cement Sewer Pipe;* [Read to Natnl. Cement Users' Asso.].—Rock Products, March,1912; p. 54; 2500 w; 25c. Also in Canadian Engr., May16, p. 679; 2500 w; 35c.

Simms, C. E.—*Cement Drain Tile in Iowa;* velopment and status of the industry in the U. S.; read to Nebraska Cement Users' Asso.].—Rock Products, May,1912; p. 36; 1000 w; 30c.

Simms, C.E.—*Cement Drain Tile in Iowa;* [Read to Iowa Asso. of Cement Users].—Iowa Engr., Feb.,1912; p. 141; 3000 w; 25c.

Talbot, A. N., and D. A. Abrams.—*Method of Making Tests on Drain Tile;* [Read to Natnl. Asso. of Cement Users; abstract].—Engg. Record, Apr.6,1912; p. 384; 2500 w*; 25c.

———. *The Manufacture of Cement Sewer Pipe in Brooklyn.*—Engg. Record, May18,1912; p. 548; 500 w; 25c.

MISCELLANEOUS

Johnson, I. C.—*The Origin of Portland Cement.*—Cement Age, Dec.,1911, p. 254; 3500 w*; 25c.

Lesley, R. W. and E. L. Conwell.—*The Association of German Portland Cement Manufacturers;* [English summary of February meeting, 1911].—Cement Age, Dec., 1911, p. 248; 3200 w; 35c.

Meade, R. K.—*The Distribution of Power in Portland Cement Manufacture;* [Read to Amer. Inst. of Chem'l Engrs., abstract].—Jnl. of Ind'l & Engg. Chem'y, May,1912; p. 378; 2500 w; 65c.

Moye, A.—*Wilhelm Michaelis;* [Biographic sketch; in German].—Ton Industrie Ztg., May18,1912; p. 828; 3500 w; 30c.

Natnl. Asso. of Cement Users.—[*Proceedings and abstracts of some of the papers at eighth annual convention, Kansas City, March,* 1912].—Rock Products, March, 1912; p. 54; 5000 w*; 25c. Also in Engg. News, March2, p. 557; 5000 w; 25c.

Quietmeyer, Fr.—*Zur Geschichte der Erfindung des Portlandzementes;* [History of discovery of Portland cement].—Hannover Techn. Hochschule dissert; 1911; 188 pp; 17 figs; $2 (book).

In French in Rev. d. Matériaux, May, 1912; p. 49; 2400 w*; 65c.

Verein Deutscher Portlandzement-Fabrikanten E. V.—[*Proceedings and abstracts of papers at annual meeting, Berlin;* Feb.29-March2,1912; in German].—Ton-Industrie Ztg., March12,1912; p. 443; 3000 w; 25c Also in Chemiker Ztg., Apr.23, p. 452; Apr. 25, p. 464; Apr.27, p. 475; 5000 w; 65c. Also in Zts. f. Angew. Chemie, May3, p. 896; 7500 w; 45c.

Wilson, F. P.—*Cement Paving as Constructed at Mason City, Iowa;* [Read to Iowa Asso. of Cement Users].—Iowa Engr., Feb.,1912; p. 209; 2600 w; 25c.

Zementwaren-Fabrikanten-Verein Deutschlands E. V.—[*Proceedings and abstracts of papers at annual meeting, Berlin, Feb.*29, 1912; in German].—Ton-Industrie Ztg., March12,1912; p. 445; 1800 w; 25c.

Associated Portland Cement Mfrrs., Ltd. —*Everyday Uses of Portland Cement.*—London, 1911 (2d edition); pp. —; $1 (book).

———. *The Storage of Portland Cement.* —Cement, Feb.,1912; p. 276; 1000 w; 30c.

CONCRETE

Schlick, E.—*Zerstörung von Beton durch Bodenbestandteile;* [Decomposition of concrete by reagents in the ground].—Ton Industrie Ztg., Feb.29,1912, p. 358; 500 w; 30c.

Borrowman, Geo.—*Some Observations on the Disintegration of Cinder Concrete.*—Jnl. of Ind'l & Engg. Chem'y, June,1912; p. 405; 1200 w*; 65c.

Brown, S. H.—*Methods of Washing Sand and Gravel;* [Read to Iowa Asso. of Cement Users].—Iowa Engr., Feb.,1912; p. 154; 1000 w; 25c.

Chapman, C. M.—*Testing Sand for Use in Concrete and Cement Mortar.*—Engg. Record, Apr.27,1912; p. 465; 2800 w; 20c.

Cochran, J.—*Precautions to be Taken in Concreting in Freezing Weather;* [From Cornell Civil Engineer].—Engg. & Contractg., Jan.24,1912, p. 87; 2800 w; 20c.

Cochran, J.—*Inspection of Waterproofing for Concrete Work.*—Engg. & Contractg., Apr.3,1912; p. 370; 4500 w; 20c.

Cochran, Jer.—*Directions and Suggestions for the Inspection of Concrete Materials.*—Engg. & Contractg., Jan.31,1912, p. 115; March6, p. 258; March13, p. —; 20,000 w*; 40c.

Cochran, J.—*Inspection of Concrete Sidewalk, Curb and Gutter Construction.*—Engg. & Contractg., Apr.17,1912; p. 457; 10,000 w; 20c.

Compton, A. M.—*Experience with Concrete Pavements in Davenport;* [Read to Iowa Engg. Soc.; abstract].—Engg. & Contractg., March20.1912; p. 318; 1000 w; 20c. Also in Engg. Record, May4, p. 483; 1800 w; 25c

Cunningham, Edw.—*An Economical Concrete Plant.*—Engg. Record, Jan.6,1912, p. 13; 1200 w*; 20c.

Derleth, C. and A. C. Alvarez.—*Determination of Voids in Concrete Aggregates.*—Jnl. of El'y Power & Gas, March9,1912; p. 224; 750 w; 35c.

Dieckmann, G. P.—*Requisites of Good Concrete;* [Read to Iowa Asso. of Cement Users].—Iowa Engr., Feb.,1912; p. 194; 2100 w; 25c.

Freeman, J. R.; E. E. Free and R. H. Gaines.—*A Proposed Study of Concrete Sands; Defective Sands.*—Engg. News, May 30,1912; p. 1022; 6000 w; 25c.

Gramir, G.—*Les agglomérés de bérés de béton, leur fabrication et leur application;* [Concrete blocks, their manufacture and use].—Rev. de Matériaux, Feb.,1912; p. 17; 3000 w*; 65c.

van der Kloes, J. A.—*Calcul de l'imperméabilité, du rendement et du prix de revient des mortiers et du béton;* [Estimating the impermeability, the yield and the net cost of mortars and concrete].—Rev. d. Matériaux, March,1912; p. 26; 2000 w*; 65c.

Larned, E. S.—*A Study of Sand for Use in Cement Mortar and Concrete.*—Asso. of Engg. Soc's; Jnl; Apr.,1912; pp. 189-204*; 40c.

Mandigo, C. R. and others.—*Concrete Paving in Eight Cities.*—Municipal Jnl., March21,1912; p. 415-425; 25c.

McMaster, W. B.—*Fire Proof Value of Concrete.*—Rock Products, May,1912; p. 35; 1500 w; 30c.

Moye, A.—*Die Einwirkung von Säuren auf Beton;* [The effect of acids on concrete].Ton-Industrie Ztg., Apr.27,1912; p. 712; 600 w; 30c.

Moyer, A.—*Economical Selection and Proportion of Aggregates for Portland Cement Concrete.*—Cement, Dec.,1911, p. 211-225; 30c.

Neumann, E.—*Die Einwirkung von Säuren auf Beton;* [Influence of acids on concrete].—Ton-Industrie Ztg., Apr.6,1912; p. 601; 3500 w; 25c.

Nicholl, J. S.—*Cold Weather Concrete Work.*—Cement Age, Feb.,1912; p. 81; 2100 w*; 25c.

Oldér, C.—*Proportioning Gravel Concrete;* [Read to Ill. Soc. of Engrs. & Surveyors].—Engg. Record, Feb.3,1912, p. 122; 2500 w*; 20c. Also in Engg. & Contractg., Feb.14, p. 173; 2100 w*; 20c.

Scherer, G. C.—*Economical Layout of a Concrete Plant.*—Engg. News, Feb.22,1912; p. 340; 700 w*; 25c.

Schwalenberg, G.—*Oesterreichs Beton-Industrie in den letzen* 9 Jahren; [Developments in the concrete industry in Austria in the past 9 years.—Ton-Industrie Ztg., March30,1912; p. 558; 1800 w; 30c.

Taylor, F. W., and S. E. Thompson.—*Concrete Costs; Tables and Recommendations for Estimating the Cost of Labor Operations in Concrete Construction and for Introducing Economical Methods of Management.*—New York and London, 1912; 709 pp; 82 figs; $5 (books).

Wig, R. J.—*The Effect of High-Pressure Steam Curing on the Crushing Strength of Concrete;* [U. S. Bur. Standards, Technologic Paper No. 5; abstract].—Engg. & Contractg., Feb.28,1912; p. 231; 1500 w*; 20c.

Concrete Inst. of Gt. Britain; Tests Committee.—*Proposed British Standard Tests for Concrete and Reinforced Concrete.*—Engg. Record, May18,1912; p. 544; 1500 w; 25c.

Natnl. Asso. of Cement Users.—[*Recommended Practice for Plain Concrete Drain Tile; Standard Specifications for Road and Street Pavement, Plain Concrete Floors, Reinforced Concrete Floors*].—Cement, March, 1912; p. 313-321; 30c.

Natnl. Asso. of Cement Users; Committee.—*Specifications and Methods of Tests for Concrete Materials.*—Engg. Record, March30,1912; p. 349; 2000 w; 20c.

National Asso. of Cement Users.—[*Report of Proceedings, 8th Annual Convention, Kansas City, Mo., March,* 1912].—*Engg.* News, March21,1912; p. 557; 5000 w; 25c.

Deutscher Betonverein, E. V.—[*Proceedings and abstracts of papers at annual meeting, Berlin, Feb.*,1912; in German].—Ton-Industrie Ztg., March12,1912; p. 446; 1800 w; 25c.

———. *A Controllable Discharge Concrete Dump Bucket Especially Adapted for Pouring Thin Walls.*—Engg. & Contractg., Jan.17,1912, p. 58; 250 w*; 25c.

———. *A Heating Attachment for Concrete Mixers.*—Engg. News, Jan.18,1912, p. 103; 800 w*; 25c.

———. *Concrete and Mortar;* [Plea for more rigid specifications].—Engnrg., March 15,1912; p. 355; 2500 w; 30c.

———. *Concrete Roads;* [Discussion before Asso. of Amer. Portl. Cement Manfrrs.].—Rock Products, May22,1912; p. 20; 12,000 w*; 30c.

———. *Concrete and Mortar.*—Engnrg., May31,1912; p. 738; 2000 w; 35c.

———. *Die Schädlichkeit der Alkalien für Betondämme;* [Deleteriousness of alkali in cement and concrete for dam structures].—Ton-Industrie Ztg., Jan.20,1912; p. 109; 500 w*; 30c.

———. *Effects of Age Upon the Ultimate Strength, Modulus of Elasticity and Yield Point of Concrete in Compression;* [From tests by U. S. Bur. of Standards].—Engg. & Contractg., May22,1912; p. 569; 500 w*; 20c.

———. *Laboratory Method of Obtaining Correct Proportion of Portland Cement to Sand or Stone.*—Canadn. Engr., Jan.11,1912, p. 150; 750 w; 25c.

———. *Methods of Patching and Repairing Concrete;* [Abstract of masonry-committee report of Amer. Ry. Engg. Asso.].—Engg. Record, March30,1912; p. 346; 1200 w; 20c.

———. *Steam Tests on Concrete and Mortar;* [Made at U. S. Geol. Survey, Technologic laboratory, St. Louis].—Engg. Record, March16,1912; p. 291; 2800 w; 20c.

CEMENT GUN

Jordan, Wm. A.—*The Cement Gun.*—Amer. Soc. of Engg. Contractors, Proc., Dec.,1911, pp. 407-434*; 50c.
Abstract in Compr. Air Mag., March, 1912, p. 6347; 2100 w*; 25c. Also in Engg. Mag., April, p. 116; 1000 w*; 35c.

Springer, J. F.—*Mechanical Appliances on the Panama Canal; Part 4: Dredging and Concrete Construction.*—Cassier's Mag., May,1912; p. 442-462*; 35c.

———. *Comparative Tests of Cement-Gun Concrete and Hand-Applied Concrete.*—Engg. News, Jan.4,1912, p. 26; 1000 w; 25c.

———. *Properties of Hand-Mixed and Cement-Gun Mortars.*—Engg. Record, March 9,1912; p. 271; 1500 w*; 20c.

LIME AND MORTAR

For mortars, see also under Concrete.

Baumgartner, H. W.—*Directory of Portland Cement Manufacturers, together with Manufacturers of Gypsum and Lime,* 1912.—Chicago, 1912; 250 pp*; $1; (book).

Burchartz, H.—*Die Erhärtung von Kalkmörtel in Mauerwerk aus Ziegeln und Kalksandsteinen;* [The setting of slaked lime in brick walls and in sand-lime brick walls; read to Ver. d. Kalksandsteinfabriken].—Ton-Industrie Ztg., March28,1912; p. 541; 3000 w*; 25c.

Burchartz, H.—*Einfluss der Höhe des Sandzustatzes auf die Festigkeit von Trasskalkmortel;* [Influence of the quantity of sand added to trass-mortar; from Kgl. Materialprüfungsamts]. — Ton-Industrie Ztg., Jan.27,1912, p. 150; 2000 w*; 35c.

Fabesch, H.—*Die wirtschaftliche Bedeutung der Verwendung von Kalk statt Trass bei Talsperrenbauten;* [Use of lime instead of trass in dam structures; discussion before Ver. d. Kalkindustriellen Böhmen, Mahren u. Scheisien].—Ton-Industrie Ztg., Jan.6,1912, p. 29; 1500 w; 35c.

Groud, Ch.—*Fabrication de la chaux sans installation spéciale;* [Lime burning without special equipment].—Rev. d. Matériaux, Nov.,1911, p. 199; 2200 w; 65c.

Groud, Ch.—*Chaux en Agriculture;* [Lime in agriculture].—Rev. d. Matériaux, March, 1912; p. 31; April, p. 47; May, p. —; June, p. 77; July, p. —; 6000 w*; $2.25.

Jean, E.—*Cuisson de chaux pures;* [The burning of pure lime].—Rev. d. Matériaux, April,1912; p. 37; May, p. 52; June, p. 71; July, p. —; 12,000 w*; $1.70.

Joannini, —. *Die Folgen des Gebrauchs unrichtig zusammengesetzter Mörtel;* [Some consequences of the use of mortar of faulty composition].—Ton-Industrie Ztg., Feb.15,1912; p. 253; 2100 w; 25c.

Klehe, T.—*Consommation de charbon pour la cuisson de la chaux;* [Consumption of coal in calcining lime in the annular kiln; from Ton-Industrie Ztg.].—Rev. d. Matériaux, Dec.,1911, p. 211; 500 w; 65c.

Klähr, Dr.—*Ein Besuch der Posener Kalkwerke in Friedheim, Bez. Bromberg;* [A trip to the Posen lime works in Friedheim near Bromberg].—Ton-industrie Ztg., Dec. 2,1911, p. 1697; 500 w*; 35c.

van der Kloes, J. A.—*Calcul de l'imperméabilité, du rendement et du prix de revient des mortiers et du béton;* [Estimating the imperméability, the yield and the net cost of mortars and concrete].—Rev. d. Matériaux, March,1912; p. 26; 2000 w*; 65c.

van der Kloes, J. A.—*L'industrie de la chaux de coquillages en Hollande;* [The lime-from shells industry in Holland].—Rev. d. Matériaux, Nov.,1911, p. 193; 3000 w; 65c.

Lazell, E. W.—*Lime Standards;* [Read to Natnl. Lime Mfrrs. Asso.; abstract].—Rock Products, Feb.,1912; p. 39; 3000 w; 25c.

Meade, R. K.—*The Manufacture and Properties of Hydrated Lime.*—Amer. Inst. Cheml. Engrs., Trans., Vol. III, pp. 312-326*.

Parks, H. M.—*Resources of Oregon.*—See under Oregon.

National Lime Mfrrs. Asso.—*Announcement of New York Meeting, Feb.,* 1912; [with List of Papers].—Rock Products, Jan.,1912, p. 32; 1500 w; 30c.

Reinbold, K.—*Die kleine Kalkbrennerei;* [The small lime-burning plant].—Ton-Industrie Ztg., Feb.27,1912, p. 348; 500 w; 35c.

Scheel, K.—*Höhenänderung gemauerter Pfeiler infolge Erhärtung des Mörtels;* [The change in height of columns due to the setting of lime or mortar].—Ton-Industrie Ztg., Feb.17,1912, p. 269; 1500 w; 25c.

Schmatolla, E.—*Gasschachtofen;* [Gas-fired shaft lime-kiln near Louisville].—Ton-industrie Ztg., Dec.9,1911, p. 1732; 300 w*; 35c.

Schmatolla, E.—*Natural Draft and Natural Pressure;* [With special reference to a producer-gas fired shaft-kiln for lime, magnesite or other stone].—Natnl. Lime Mfrrs. Asso., Proc. 10th Annual Convention, Bull. No. 9; 1912; 23 pp.*; 50c.

Spackman, H. S.—*The Use of Alca Limes.*—Rock Products, Feb.,1912; p. 43; 2500 w; 25c.

Steglich, Dr.—*Was muss der Landwirt vom Kalke wissen;* [Things the farmer should know about agricultural lime; from Sächs. Landw. Ztg., 1911, p. 471].—Ton-Industrie Ztg., Jan.13,1912, p. 71; 300 w; 30c.

Stitt, J. S.—*Hydrated Lime on the Farm.*—Rock Products, March,1912; p. 33; 750 w; 25c.

Verein Deutscher Kalkwerke.—[*Proceedings and abstracts of papers at annual meeting, Berlin, Feb.,*1912; in German].—Ton-Industrie Ztg., March7,1912; p. 416; March9, p. 435; 4000 w; 35c.

Vogel, O.—*Kalkbrennen und Kalkhandel im alten Nürnberg;* [Lime burning and lime trade of Old Nürnberg].—Ton-Industrie Ztg., Feb.3,1912; p. 187; 600 w; 30c.

White, Alfr. H.—*Zerstörung von Mörtel;* [The decomposition of mortar].—Ton-industrie Ztg., Dec.9,1911, p. 1737; Dec.16, p. 1767; Dec.23, p. 1807; Dec.30, p. 1809; 6000 w*; 50c.

Wheeler, H. J.—*Is the Recommendation that only Ground Limestone Should be Used for Agricultural Purposes a Sound and Rational One?*—Natnl. Lime Manfrrs. Asso., Proc. of 10th Annual Meeting, Bull. 4; 1912; 20 pp.; 50c.

Young, E. S.—*Testing Commercial Limes.*—National Lime Manfrrs. Asso., 10th Annual Convention; Bull. No. 5; 1912; 8 pp.; 50c.

———. *A Model Lime-Producing Plant;* [Mitchell, Indiana].—Rock Products, May, 1912; p. 46; 1500 w; 30c.

———. *Electrical Plant at the Buxton Lime Firms' Quarries;* [Derbyshire].—El. Rev. (London), Jan.12,1912, p. 59-63*; 3000 w; 35c. Also in Stone Trades Jnl., April, 1912; p. 1105; 3000 w*; 35c.

———. *Schadet lösliche Kieselsäure im Düngekalk?* [Is soluble silica detrimental in

lime fertilizers?].—Ton-Industrie Ztg., Jan. 6,1912, p. 32; 300 w; 35c.

———. *Temperaturmessung im Kalkschachtofen;* [Temperature measurement in the shaft lime kiln].—Ton-Industrie Ztg., Feb.27,1912; p. 348; 400 w*; 30c.

———. *The Potomac Refining Co.;* [Lime and hydrating plant near Harper's Ferry].—Rock Products, Apr.,1912; p. 3; p. 39; 500 w*; 30c.

———. *Uses of Lime.*—Rock Products, March,1912; p. 33; 750 w; 30c.

———. *Woodville Lime & Cement Co. New Plant;* [Woodville, Ohio].—Rock Products, Feb.,1912; p. 40; 1000 w*; 25c.

SANDLIME

Burchartz, H.—*Die Erhärtung von Kalkmörtel in Mauerwerk aus Ziegeln und Kalksandsteinen;* [The setting of slaked lime in brick walls and in sand-lime brick walls; read to Ver. d. Kalksandsteinfabriken].—Ton-Industrie Ztg., March28,1912; p. 541; 3000 w*; 25c.

Ernest, T. R.—*Zur Chemie des Kalksandsteins;* [The chemistry of the sandlime industry; from Amer. Ceramic Soc., Trans., Vol.13,1911, pp. 648-668; German abstract in] Ton-Industrie Ztg., Jan.11,1911, p. 49, Jan.18, p. 93; 4500 w; 35c.

Ford, L. P.—*Proposed Industry to Utilize Chalk Beds of Sussex;* [Calcium silicate industry suggested].—Stone Trades Jnl., June,1912; p. 1173; 2000 w; 35c.

Kosman, B.—*Die Kalziumsilikate der Kalksandsteine;* [The calcium silicates of sandlime products; read to Ver. d. Kalksandsteinfabriken].—Ton-Industrie Ztg., Apr. 25,1912; p. 693; 3500 w; 30c.

Krieger, B.—*Hydraulischer Kalk für Kalksandsteine;* [Hydraulic lime for sandlime].—Ton Industrie Ztg., May9, 1912; p. 773; 2100 w; 35c.

Kreiger, B.—*Prüfung und Eigenschaften holländischer Ziegel und Kalksandsteine;* [Testing and properties of Holland brick and sandlime brick].—Ton-Industrie Ztg., Feb.22,1912; p. 302; 4000 w; 25c.

Krieger, B.—*Hydraulischer Kalk für Kalksandsteine;* [Hydraulic lime for sandlime].—Ton Industrie Ztg., May9,1912; p. 773; 2100 w; 35c.

Middleton, J.—*The Production of Sandlime Brick in the U. S. in* 1911.—U. S. Geol. Surv., Mineral Resources f. 1911; 1912; 5 pp; 20c. Abstract in Rock Products, Apr. p. 50; 500 w; table; 30c.

Schleier, E.—*Becherwerke für Kalksandsteinfabriken;* [Elevators for sandlime works].—Ton-Industrie Ztg., Feb.15, 1912, p. 255; 300 w; 25c.

Simpson, P. L.—*The Manufacture of Sand Lime Brick in Europe;* [read to Sand Lime Brick Mnfrrs. Asso., Grand Rapids, Dec.,1911].—Rock Products, Dec.,1911, p. 38; 5000 w*; 25c.

Verein der Kalksandsteinfabriken, E. V. —[*Proceedings and abstracts of papers at twelfth annual meeting, Berlin, Feb.*,1912; in German].—Ton-Industrie Ztg., March2, 1912; p. 381; 3600 w; 25c. Also in Chemiker Ztg., May7, p. 511; 500 w; 30c.

Wolf, A.—*Gequetschter Sand, ein vorzügliches Rohmaterial zur Zementwaren-Fabrikation;* [Roll-crushed sand, an admirable material for the manufacture of cement and sandlime products].—Montan. Ztg., May1,1912; p. 162; 750 w*; 35c.

———. *Sand-Lime Testing Department;* [Describes laboratory practice of American Clay Machinery Co., Willoughby, Ohio].—Rock Products, Dec.22,1911, p. 37; 750 w; 25c.

Brick and Tile

Beyer, S. W.—*Iowa's Rank as a Brick Producer and Future Prospects;* [Read to Iowa Brick & Tile Asso.].—Iowa Engr., May,1912; p. 315-323*; 3000 w*; 30c.

Binns, C. F., and A. Vogt.—*Efflorescences and Discolorations on Bricks.*—Brick, Feb. 15,1912; p. 186; 1600 w; 20c.

French translation in Rev. d. Matériaux, May, p. 49-B; 1500 w*; 30c.

Clauss, R.—*Kalkhaltige Ziegel und Brennkanallänge;* [Lime-bearing brick and the length of burning chamber in the ring oven].—Ton-Industrie Ztg., Apr.4,1912; p. 585; 600 w; 30c.

Darras, M.—*La brique au point de vue architectural;* [Brick from the architectural point of view; discusses Donn Barber's theories].—Rev. d. Matériaux, March,1912; p. 25B; 3500 w; 65c.

Dobson, E.—*A Rudimentary Treatise on the Manufacture of Bricks and Tiles.*—London,1911 (12th edition); 282 pp.; $1.25 (book).

Greaves-Walker, A. F.—*Efflorescence on Brick Work;* [abstract; from Jnl. of Ind'l & Engg. Chem'y].—Chemi. Engr., Dec.,1911, p. 485; 1600 w; 35c.

Hardy, E.—*Briques émaillées;* [Enameled Brick].—Rev. d. Matériaux, Feb.,1912; p. 18; 2000 w; 65c.

Howard, Jas. E.—*Strain Measurements of Brick Pavements;* [Read to Natnl. Brick Mnfrrs. Asso., March,1912].—Municipal Jnl., Apr.4,1912; p. 511; 1500 w*; 25c.

Kreiger, B.—*Prüfung und Eigenschaften holländischer Ziegel und Kalksandsteine;* [Testing and properties of Holland brick and sandlime brick].—Ton-Industrie Ztg., Feb.22,1912; p. 302; 4000 w; 25c.

Krieger, B.—*Eine Studienreise nach Bayern;* [Study trip to the brick works and clay industries of Bavaria].—Ton Industrie Ztg., May21.1912; p. 837; May23, p. 849; May25, p. 867; June4, p. 897; June6, p. 909; June18, p. 975; June20, p. 980; June 25; p. 1016; July4, p. 1069; 10,000 w*; 85c.

Pinkl, V. and G. Maynard.—*Vorzüge und Nachteile der Verkaufsvereinigungen;* [Advantages and drawbacks to centralized syndicated selling agencies, especially in the new German Brick Syndicate].—Ton-Industrie Ztg., Jan.25,1912; p. 135; 4000 w; 25c.

Richardson, W. D.—*Cost-keeping System;* [at Brantford Pressed Brick Co.].—Brick, Jan.15,1912; p. 79-83*; 20c.

Schroeder, C.—*Nochmals "Kalk im gebrannten Ziegel"* [The problem of lime and its effect in burned brick].—Ton-Industrie Ztg., Feb.6,1912; p. 195; 3200 w; 30c.

Schünhoff, F.—*Welche Anforderung stellt die moderne Baukunst an die Ziegelindustrie;* [The demands upon the brick industry of modern engineering construction; read to Ziegelei-Besitzer Ver. f. Südhannover, 1912]. —Ton-Industrie Ztg., March2,1912; p. 393; 1200 w; 25c.

Sektion der Dachziegelfabrikanten.—[*Abstract of proceedings and papers at eighth general meeting, Berlin.* March4,1912; in German].—Ton-Industrie Ztg., March26, 1912; p. 531; 3500 w; 25c.

Udden, J. A.—*Geology and Mineral Resources of the Peoria Quadrangle, Illinois;* [Chiefly coal and brick and tile].—U. S. Geol. Surv., Bull. 506; 1912; 101 pp*; 10c.

———. *Buffville, the Brick Town;* [Brick industry at Buffville, Kans.].—Brick, Apr. 15, p. 359; 750 w*; 20c.

———. *Chicago and its Brick and Clay Industry.*—Brick, Feb.15,1912; p. 163-175*; 20c.

———. *Die neue Verkaufsvereinigung deutscher Dachziegelfabrikaten;* [The new sales-agency syndicate of German brick-makers].—Ton-Industrie Ztg., Jan.11,1912, p. 53; Jan.23, p. 124; March28, p. 546; 3000 w*; 30c.

———. *Der Winterbetrieb auf Ziegeleien;* [Winter operations at brick works; (1), pressing and drying departments; (2) clay pits].—Ton-Industrie Ztg., Jan.23,1912; p. 122; Jan.25, p. 135; 1800 w; 40c.

———. *Ein Jubuläum in Freiwaldau;* [75 year anniversary of the Sturm brick and tile industry near Freiwaldau].—Ton-Industrie Ztg., Apr.30,1912; p. 721; 3000 w*; 30c.

———. *Fabrication de briques au moyen de déchets;* [Brick manufacture from wastes; from British Clay Worker].—Rev. d. Matériaux, March,1912; p. 31; 1200 w; 65c.

———. *Gute Dachziegel und ihr Verhalten;* [High grade roofing tile, its characteristics].—Ton-Industrie Ztg., Jan.11, 1912, p. 51; 600 w; 35c.

———. *Irrégularités des cones Seger;* [Irregularities in Seger cones; from "British Clay Worker"].—Rev. d. Matériaux, April,1912; p. 42-B; 750 w*; 65c.

———. *Kalk im gebrannten Ziegel;* [Significance of lime in burned brick].—Ton-Industrie Ztg., Jan.9,1912, p. 41; 1100 w; 25c.

———. *L'industria latèrizia in Italia;* [The brick industry in Italy].—Cimento, Jan.15,1912; p. —; 2500 w; 50c.

———. *Maschinelle Entladung von Mauersteinen;* [Cranes and mechanical unloading devices for bricks and building blocks].—Ton-Industrie Ztg., Jan.25,1912; p. 133; 800 w*; 30c.

———. *Natürliche oder künstliche Trocknung;* [Natural or artificial drying?].—Ton-Industrie Ztg., March12,1912; p. 441; 1500 w; 25c.

———. *Nebenbetriebe für Ziegeleien;* [How to keep the brick plant busy in the winter season with side-lines of industry].—Ton-Industrie Ztg., March2,1912; p. 378; 1500 w; 25c.

———. *The Question of Costs;* [Efficiency in cost accounting; methods of Buffalo Brick Co.].—Brick, Apr.1,1912; p. 321-328*; 20c.

———. *Ungarische Ziegeleianlagen;* [Some Hungarian brickworks].—Ton-industrie Ztg., Dec.7,1911, p. 1715; 800 w*; 30c.

———. *Un pyromètre pour fours Hoffman;* [Féry radiation pyrometer; from British Clay Worker, July,1911].—Rev. d. Matériaux, Dec.,1911, p. 207B; 500 w*; 65c.

DRYING; PRESSING; KILNS

See also under "Ceramics."

Hein, R.—*Zur Trockenfrage auf Ziegeleien;* [Drying problem at brick works].—Ton-Industrie Ztg., March9,1912; p. 429; 500 w; 25c.

Kühnel, J. F.—*Verbesserte Exzenter-Revolverpressen;* [Improved eccentric revolving presses].—Ton-Industrie Ztg., March 5, 1912; p. 394; 1000 w*; 25c.

Lovejoy, E.—*Séchage des poteries de drainage;* [Drying equipment for drain tile or brick works; from Brick & Clay Record, Aug.,1911].—Rev. d. Matériaux, Dec., 1911, p. 205B; 2500 w*; 65c.

Roos and N. Fredriksson.—*Beschaffenheit der Tone und Kraftverbrauch beim Verpressen;* [Physical properties of clays, and power consumption in their pressing; read to Swedish Brick Industry Asso., 1911].—Ton-Industrie Ztg., March9,1912; p. 429; 3000 w; 25c.

———. *Brennhaushilfsgeräte in Ziegeleien;* [Useful implements and aids in the oven-house of brick works].—Ton-Industrie Ztg., May7,1912; p. 763; 1500 w*; 35c.

———. *Dachziegeleinsatz im Ringofen;* [Insertion of roofing tile in the kiln].—Ton-Industrie Ztg., Feb.13,1912, p. 241; 1600 w*; 25c.

———. *Der Presskopf;* [The cap of the brick press].—Ton-industrie Ztg., Dec.7, 1911, p. 1716; 1200 w*; 35c.

———. *Die Trockenfrage auf Ziegeleien;* [The drying problem in brick works].—Ton-Industrie Ztg., Feb.20,1912, p. 287; 1500 w; 25c.

———. *Ein sonderbarer Ringofen;* [A noteworthy annular brick oven].—Ton industrie Ztg., May16,1912; p. 813; 1000 w*; 35c.

———. *Electric Power in Brick-Making Plants.*—El Rev. (Chicago), May11,1912; p. 887; 5000 w*; 30c.

TILE

For cement tile see under Cement.

Bock, O.—*Dachziegeleinsatz im Ringofen;* [Efficiency in roofing-tile charge in the ring oven].—Ton-Industrie Ztg., March2,1912; p. 377; 500 w*; 25c.

Marani, V. G.—*Proposed Specifications for Hollow Clay Tile Building Blocks.*—Engg. News, Feb.8,1912; p. 248; 1800 w*; 25c.

Powell, J. M.—*Burning and Drying Tile;* [Read to Iowa Brick & Tile Asso; abstract].—Brick, Apr.15,1912; p. 383; 1500 w; 20c.

Weist, Julius.—*Der Dachziegeleinsatz;* [The setting of roofing tile in the oven.—Ton-industrie Ztg., Dec.5,1911, p. 1707; 1000 w; 35c.

Whipple, B. J.—*Rotation of Tile Sizes;* [Read to Iowa Brick & Tile Asso.].—Brick, Apr.15,1912; p. 383; 1000 w; 20c.

Worcester, W. G.—*Déformation des tuiles de couverture en argile;* [Bending and deformation of clay roofing tiles].—Rev. d. Matériaux, March,1912; p. —; April, p. —; May, p. 52-B; 9000 w*; 65c.

M. W.—*Dachziegeleinsatz im Ringofen;* [Problem of most efficient insertion of roofing-tile in the annular oven].—Ton-Industrie Ztg., March26,1912; p. 528; 1000 w*; 25c.

———. *Dachziegelabschneider von Ruetz;* [Roofing-tile cutter of Reutz].—Ton-Industrie Ztg., Jan.25,1912; p. 139; 500 w; 30c.

———. *Fahrbare Dachziegelpresse;* [Portable tile presses].—Ton-Industrie Ztg., Feb.1,1912; p. 169; 500 w*; 25c.

———. *Fort Dodge Clay Industries, Iowa.*—Brick, Jan.1,1912; p. 23; 1000 w*; 20c.

Ceramics: General and Miscellaneous

Asch, W. and D.—*Die Silicate in chemischer und Technischer Beziehung;* [The silicates in their chemical and technical relations; and the Hexite-Pentite Theory and its Bearing on Stereochemistry].—Berlin, 1911, p. 409; $5.00 (book).

Bleininger, A. V., and T. L. Boys.—

Temps nécessaire à la vitrification des argiles; [Time required for the vitrification of clays; from Brick & Clay Record, Dec., 1911].—Rev. d. Matériaux, Feb.,1912; p. 13B; 1000 w*; 65c.

Bollenbach, H.—*Appareil pour l'analyse des argiles par lévigation;* [Apparatus for the testing of clays by levigation; from Ton-Industrie Ztg.].—Rev. d. Matériaux, April,1912; p. 41-B; 1000 w*; 65c.

Buckley, E. R.—*Clay Working Operations; Some Practical Suggestions.*—Brick, Feb.1,1912; p. 131; 1800 w; 20c.

Burton, Wm.—*Ancient Egyptian Ceramics.*—Roy. Soc. of Arts, Jnl., May3,1912; p. 594-602; 35c.

Dralle, R.—*Die Glasfabrikation;* [The Glass Manufacturing Industry].—Munich and Berlin, 1912; 2 vols; 1269 pp; 1031 figs; 48 plates; (book).
Review in Riga Ind. Ztg., Jan.31,1912, p. 20; 3500 w; 35c.

Dressler, C.—*A New Tunnel Oven;* [Especially for tiles].—Engl. Ceramic Soc., Trans., Vol. 11, Part 1, 1912; p. 38-55; 7000 w*; $6.

Eckel, E. C.—*Building Stones and Clays, Their Origin, Characters and Examination.*—N. Y., 1912; pp. xiv., 264; 37 figs.; $3; (book).

Eyer, Ph.—*Majolika- und einfarbige Glasuren auf Oefen und Kochgeschirre;* [Majolica and single-tinted glazes for ovens and cooking utensils.]—Eisen Ztg., June1,1912; p. 398; 1000 w; 35c.

Hancock, W. C.—*The Physical Properties of Clays.*—Soc. of Chemi. Ind'y, Jnl., Dec. 30, 1911, p. 1429; 4000 w; 65c.

Hecht, Dr.—*Besuch einer Blumentopffabrik bei Berlin;* [The G. Krüger flower-pot works, Pankow near Berlin].—Ton-Industrie Ztg., Jan.4,1912, p. 17; 500 w; 35c.

Hirano, Prof.—*Porzellanbrennöfen in Japan;* [Porcelain kilns in Japan].—Ton-Industrie Ztg., March19,1912; p. 481; 1000 w*; 25c.

Katz, F. J.—*Clay in the Portland Region, Me.*—U. S. Geol. Survey Bull., 530-I; 1912; pp. 20-24*; 10c.

King, J.—*The Commercial Application of Town's Gas for Furnace Work;* [Use of *urban gas in pottery and other furnaces*].—English Ceramic Soc., Trans., Vol. 11, Part 1, 1912; pp. 104-117*; $6.

Koerner, J.—*Sprechsaal Kalender für die keramischen Glas- und verwandten Industrien;* ["Sprechsaal's Yearbook" for the ceramic, glass and allied industries, Vol. 4, 1912].—Coburg, 1912; 160 pp; $1.25 (book).

Lomax, A. — *Transparent Tin-Oxide Glazes.*—English Ceramic Soc., Trans., Vol. 11, Part 1, 1912; u. 118-143*; $6.

Lunge and Berl.—*Testing Methods in the Chemical Industries* (in German).—See under Chemistry.

Matson, G. C.—*Notes on the Clays of Delaware.*—U. S. Geol. Survey Bull., 530-I; 1912; pp. 3-19; 10c.

McCallie, S. W.—*Pottery Plants for Georgia;* [Advantages of several proposed locations].—Manfrrs. Record, Apr.25,1912; p. 55; 500 w; 25c.

Middleton, J.—*Clay Products and Clay in the South.*—Manfrrs. Record, Feb.22,1912; p. 65; 4000 w; 65c.

Moye, A.—*Technische Anwendungen der physikalischen Chemie; Tonwaren, Kalk, Gips, Cement;* [Technical applications of physical chemistry in the ceramic arts, lime, gypsum and cement].—Ton-Industrie Ztg., March2,1912; p. 373; 2400 w; 25c.

Orton, E.—*Clays and Clay Industries of Edmonton District.*—Canadian Engr., May 30,1912; p. 58; 1000 w; 25c.

Ramsden, C. E.—*Notes on the Chromium Red Glaze.*—English Ceramic Soc., Trans., Vol. 11, Part 1, 1912; p. 29-37; 4000 w.

Rieke, R.—*Die Schmelzpunkte der Segerkegel 022 bis 15;* [The melting points of Seger cones 022 to 15].—Ton-industrie Ztg., Dec.14,1911, p. 1751; 6000 w*; 35c.

Ries, H.—*The Clay and Shale Deposits of the Western Provinces of Canada.*—Canadian Mng. Inst., Jnl., No. 16, Oct.,1911, pp. 11-55*; $1.20.

Percy, E. N.—*Other Industrial Applications of Oil Burning;* [Smelting; lime and cement, brick and refractories manufacture].—Jnl. of El'y Power & Gas, Jan.6, 1912, p. 8; 3000 w*; 35c.

Phelps, H. M.—*Preliminary Drying;* [Investigations by technologic branch of U. S. Geol. Survey].—Brick, Jan.1,1912; p. 45; 1500 w; 20c.
French abstract in Rev. d. Matériaux, May,1912; p. 50-B; 500 w*; 65c.

Pollard, W. B.—*The Nature of Black Glaze on Ancient Egyptian Pottery.*—Cairo Scient. Jnl., Jan.,1912; p. 22; April, p. 72; 4500 w; 75c.

Roos and N. Frederiksson.—*Beschaffenkeit der Tone und Kraftverbrauch beim Verpressen;* [Physical properties of clays and power consumption in their pressing; read to Swedish Brick Industry Asso., 1911].—Ton-Industrie Ztg., March9,1912; p. 429; 3000 w; 25c.

Searle, A. B.—*An Introduction to British Clays, Shales and Sands.*—London, 1912; 464 pp*; $2.50; (book).

Searle, A. B.—*The Natural History of Clay.*—Cambridge, Engl.; 1911; pp. 184; $1 (book).

Solon, M. L.—*List of Books on the History and Technology of the Ceramic Art; A Supplement to "Ceramic Literature."*—English Ceramic Soc., Trans., Vol. 11, Part 1, 1912; p. 65-104; $6.

Soper, E. K.—*The Geology and Mining of Clay.*—E. & M. J., Feb.3,1912; p. 263; 6500 w; 25c.

Tillotson, E. W.—*Relation of the Refractive Index of Soda-Lime Glasses to their Chemical Composition.*—Jnl. of Ind'l & Engg. Chem'y, April,1912; p. 246; 1800 w*; 65c.

Tredwell, R. C.—*British Pottery Center and American Trade;* [Review of Burslem district, Engl., 1911].—U. S. Consul. Rep., Feb.21,1912; p. 769; 1000 w; 20c.

Zenker, L.—*Die Tonwarenindustrie in Ohio;* [Clay mining and clay-products industries in Ohio].—Ton-Industrie Ztg., Jan. 23, 1912; p. 123; 750 w; 25c.

———. *Alttiroler Kachelöfen;* [Ancient Tirolean dutch-tile ovens of the Renaissance period].—Ton-Industrie Ztg., March 14,1912; p. 453; 500 w*; 25c.

———. *Die Entstaubung von Tonwarenfabriken;* [Overcoming dust in clay-products works].—Ton-industrie Ztg., Dec.21, 1911, p. 1793; 500 w; 35c.

———. *Eine Vortrocknung amerikanischer Tone;* [Experiments with some bentonitic clays from the American and Canadian Northwest.]—Ton Industrie Ztg., May 21,1912; p. 840; 1000 w; 30c.

———. *Frankenthaler Porzellan;* [Frankenthal porcelain.—Ton Industrie Ztg., Apr. 23,1912; p. 681; 2700 w*; 35c.

———. *Sur la synthèse des glaçures, des verres et des autres silicates complexes;* [Synthesis of some glazes, glasses and other complex silicates; from "Sprechsaal"].—Rev. d. Matériaux, Nov.,1911, p. 200-B; (C) 2000 w; 65c.

———. *Traitement des argiles contenant des pierres et de la chaux;* [Treatment of clays containing pebbles and lime; from Brit. Clay Worker].—Rev. d. Matériaux, March,1912; p. 33B; 1000 w*; 65c.

REFRACTORIES

Benfey, G.—*Herstellung Feuerfester Erzeugnisse;* [The manufacture of refractory products].—Hannover, 1912; pp. ——; $1.50 (book).

Blottefière, R. de.—*Note sur les matériaux réfractaires;* [Theory, testing and manufacture of silicate refractories].—Rev. d. Matériaux, Nov.,1911, p. 193-B, 5000 w*; 65c.

Dixon, A. E.—*Firebrick Furnace Arches.*—Power, Feb.20,1912; p. 246; 1500 w*; 20c.

Gary, M.—*Ueber die Prüfung feuerfester Steine nach den Vorschriften der Kaiserlichen Marine, insbesondere auf Raumbeständigkeit in der Hitze;* [Testing refractory products for the German navy, with special reference to volume behavior under heat].—Berlin, 1912; 24 pp.; 14 figs; 75c (pamphlet).

Havard, F. T.—*Notes on the History and Development of the Fireclay and Refractories Industry.*—Wisconsin Engr., Jan., 1912, p. 175; 2500 w*; 35c.

———. *Fours à tirage renversé pour la cuisson de briques réfractaires;* [Reversible ovens for baking refractory brick; from British Clay Worker, April,1911].—Rev. d. Matériaux, Dec.,1911, p. 210; 750 w*; 35c.

———. *Fours de laboratoire, système du Dr. Heinecke;* [The Heinecke laboratory furnace; from Ton-Industrie Ztg., March16, 1911].—Rev. d. Matériaux, Dec.,1911, p. 208B; 2100 w*; 65c.

CHINA CLAYS

Bishop, G. C.—*Devon & Courtenay Clay Co., Ltd.'s, Works;* [China clay quarrying].—English Ceramic Soc., Trans., Vol. 11, Part 1, 1912; p. 9; 1000 w*.

Collins, J. H.—*Observations on the West of England Mining Region;* [China clay, etc.].—Roy. Geol. Soc. of Cornwall, Trans.; Vol. XIV; 1912; pp. 684*; (book).

Coon, J. M.—*The Bloomdale China Stone & Clay Co.;* [Kaolin quarries and washeries in Cornwall].—English Ceramic Soc., Trans., Vol. 11, Part 1, 1912; p. 13; 1000 w*.

Keeling, F. A.—*Pike Bros.' Dorset Clay Mines.*—English Ceramic Soc., Trans., Vol. 11, Part 1, 1912; p. 19-28; 1000 w*.

Lowrie, W. L.—*Merger of Carlsbad Kaolin Companies, Austria.*—U. S. Consul. Rep., May1,1912; p. 424; 600 w; 20c.

———. *Ton und Kaolingruben im Königreich Sachsen;* [Clay and kaolin pits in Saxony].—Ton-industrie Ztg., Dec.19,1911, p. 1781; 1200 w; 35c.

OTHER NON-METALS.

Abrasives

Adams, F. D., and A. E. Barlow.—Important Corundum Occurrences in Ontario; [Abstract from Canada Dept. Mines, Mem. No. 6].—Mining & Engg. World, Jan.13,1912, p. 60; 750 w; 10c.

Haenig, A.—*Emery and the Emery Industry;* [Translated by Chas. Salter from the German].—New York, 1911; 104 pp.; $2 (book).

Rogers, A. F.—*On Corundum-Syenite (Uralose) from Montana.*—Jnl. of Geol'y, Nov.-Dec.,1911; p. 748-751; 65c.

Rogers, A. F.—*Baddeleyite from Montana;* [Native zirconia from corundum deposits near Bozeman, Mont.]—Amer. Jnl.

Rogers, G. S.—*The Geology of the Cortland Series and its Emery Deposits.*—N. Y. Acad. Sci., Annals; Vol. 21, 1911, pp. 11-86; $3. Brief abstract in Jnl. of Geol'y, Apr.-May,1912; p. 278; 150 w; 65c.
of Sci., Jan.,1912; p. 54; 1200 w; 65c.

Stier, d. A. G. Th.—*Die Schleifmittel, das Schleifen und Polieren;* [Abrasives, Grinding and Polishing].—Leipzig, 1912; 144 pp.; 141 figs.; $1; (book).

———. *Diamant gegen Karborundum;* [Diamond vs. carborundum in stone saws].—Kohle & Erz, March25,1912; p. 294; 750 w; 35c.

———. *Fabrication et mode d'emploi des meules d'emeri;* [Manufacture and method of using emery wheels].—Génie Civil, Dec.5, 1911, p. —; 50c.

———. *Garnet Veins on Labrador Coast* [St. Michaels Bay, north of Belle Isle].—Mines & Minerals, Jan.,1912, p. 357; 200 w; 35c.

Acids (Mineral)

Bressanin, G.—*Ueber ein neues und einfaches Verfahren zur Reinigung der Schwefelsäure;* [Use of hydriodic acid in refining sulphuric acid; brief German abstract of paper read to Reale Istituto Veneto di Scienze, Dec.17,1911].—Chemiker Ztg., March19,1912; p. 306; 100 w; 30c.

Frazier, S.—*Nitric Acid, a Few Notes and Remarks Relating to Its Manufacture.*—Amer. Inst. Cheml. Engrs., Trans., Vol. III, pp. 287, 304*.

Friedrich, A.—*Die Schwefelsäure-Produktion der oberschlesischen Zinkindustrie;* [Sulphuric acid production in the zinc smelters of Upper Silesia].—Techn. Blätter, Feb.17,1912; p. 52; 2000 w; 35c. Reprint in Zentralbl. f. Kunstdünger-Ind., March7, p. 73; March21, p. —; 50c.

Gilchrist, P. S.—*A Modern Fertilizer Factory;* [Describes ideal plant for 20,000 tons acid phosphate per year, with acid plant].—Amer. Fertilizer Handbook, 1912; pp. 75-84*; $1.50.

Hartmann, E.—*The Opl Tower System for the Production of Sulphuric Acid;* [English abstract from Zts. f. angew. Chemie, 1911; p. 2302-2305].—Cheml. Engg., Jan., 1912; p. 385; 600 w; 45c.

Hartmann, E.—*Turm- und Kammersystem;* [Tower vs. chamber system].—Zts. f. angew Chemie, Apr.26,1912; p. 817; 2400 w; 35c.

Hasenclever, Max.—*Manufacture of Sul-*

furic Acid; [Progress with pyrite, blende, galena and copper; Hunter Memorial lecture, Liverpool Univ., Oct.,1911; abstract]. —E. & M. J., Jan.20,1912, p. 175; 3000 w; 25c. German extract in Zentralbl. f. Kunstdünger-Ind., May7,1912; p. 140; 500 w; 35c.

von Kéler, H.—*Die wichtigsten Fortschritte auf dem Gebiete der anorganischen Grossindustrie im Jahre* 1911; [Most important advances in the chemical industries in 1911; (1): sulphuric acid, also hydrochloric acid, chlorine and bleaching powder; (2): nitric acid and nitrates, ammonia and ammonium salts, alkaline earths, borates, silicides, carbides, cyanides, etc.].—Zts. f. angew. Chemie, March8,1912; p. 454; March15, p. 518; 10,000 w*; $1.

Lunge and Berl, etc.—*Testing Methods in the Chemical Industries* (in German).—See under Chemistry.

Meyer, —. *Turmsystem und Kammersystem;* [Tower vs. chamber processes of sulphuric acid manufacture; costs].—Zts. f. angew. Chemie, Feb.2,1912; pp. 203-205; 75c.

Nagel, O.—*Zur Herstellung von Salzsäure aus Chlor;* [Hydrochloric-acid manufacture from chlorine and steam].—Chemiker Ztg., Jan.13,1912, p. 54; 750 w; 35c.

Nelson, W. A.—*Sulphuric Acid Manufacture in Tennessee;* [at Ducktown copper smelters].—Mng. Sci., Feb.8,1912; p. 149; 2000 w*; 20c. Reprinted in Mines & Methods, Feb., p. 407*; 20c.

Petersen, H.—*Turmsystem oder Kammersystem;* [Tower vs. chamber system].—Zts. f. angew. Chemie, Apr.19,1912; p. 762; 2000 w*; 45c.

Phalen, W. C.—*Sulphur, Pyrite and Sulphuric Acid in* 1911; Production in U. S., with "Notes on the Manufacture of Sulphuric Acid from Smelter Fumes at Ducktown, Tenn.," by F. B. Laney; pp. 24-30].—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 30 pp; 20c.

Reusch, K.—*Jahresbericht über die Industrie der Mineralsäuren und des Chlorkalkes;* [Technical review of the mineral-acid and chloride of lime industries in 1911].—Chemiker Ztg., Feb.20,1912, p. 195; Feb.24, p. 213; Feb.27, p. 218; 5500 w; 65c.

Reynolds, W. C., and W. H. Taylor.—*The Theory of Sulphuric Acid Manufacture.* —Soc. of Chem. Ind'y, Jnl; Apr.30,1912; p. 367; 2500 w; 35c.

Viola, B.—*The Evaporative Capacity of Lead-Lined Copper Coils;* [Tests with acid evaporation].—Met. & Chem. Engg., May, 1912; p. 267; 1500 w*; 35c.

Waggaman, Wm. H.—*Memorandum on the Manufacture of Sulphuric Acid;* [Methods and costs].—U. S., 62d Congr., 2d Session; Senate Doc. No. 190; 1912; pp. 112-118.

———. *Die Entwickelung der Schwefelsäureindustrie in England, den V. S., Deutschland, Russland, Italien und Frankreich,* 1910; [Development of the sulphuric acid industry in Germany, U. K., U. S., Russia, Italy, and France, 1910].—Chem. Industrie, Feb.1,1912; p. 78; 1600 w; 50c.

———. *Die Entwickelung der Schwefelsäureindustrie in Russland;* [Development of the sulphuric acid industry of Russia; from Chem. Industrie, 1912, No. 3].—Riga. Industrie Ztg., Feb.29.1912; p. 59; 500 w; 35c.

———. *Manufacture of C. P. Nitric Acid;* [From The Chemist Analyst].—Chem. Engr., Feb.,1912; p. 75; 1400 w*; 35c.

———. *Sulphuric Acid in* 1911.—Amer. Fertilizer, Feb.24,1912; p. 50; 1000 w; 25c.

———. *The American Fertilizer Hand Book.*—Philadelphia, 1912; 309 pp*; $1.50 (book).

———. *The Balance Sheet in Smelting;* [Reviews limited demand for sulphuric acid by-product of copper smelters].—M. & S. P., March30,1912; p. 461; 1200 w; 20c.

Amber

Thackara, A. M.—*Amber Industry of* Prussia.—U. S. Consul. Rep., Apr.9,1912; p. 127; 200 w; 35c.

Antimony

See under Metals, Chapter 3.

Arsenic

Hess, F. L.—*The Production of Antimony, Arsenic, Bismuth and Selenium in* 1910.—U. S. Geol. Survey, Mineral Resources f. 1910; 1911; 10 pp; 10c.

Ivanov, W. N.—*Ein einfacher Apparat zur Bestimmung kleiner Mengen von Arsen;* [Simple apparatus for determination of small amounts of arsenic].—Chemiker Ztg., Jan.9,1912, p. 31; 500 w; 30c.

Kohlschütter, V., and C. Ehlers.—*Versuche über Kondensation von Metalldämpfen;* [Tests on the condensation of metallic sublimates and vapors; arsenic, cadmium, zinc].—Zts. f. Elektrochemie, May 15,1912; p. 373; 4000 w*; 45c.

Maurantonio, L.—*L'arsenico;* [Arsenic Manual; its history, compounds, minerals, extraction, toxicology, and uses].—Milan, Italy; 1912; pp. —; $1 (book).

Parravano and de Cesaris.—*Arsenic-Antimony Alloys.* (See under Alloys.)

———. *Traitement des minerais sulfurés d'antimoine et d'arsenic;* [Treatment of antimony and arsenic sulphides].—Rev. d. Produits Chimiq., March1,1912; p. 478; 1000 w; 75c.

Asbestos

Cirkel, F.—*Some Foreign Asbestos Deposits;* [Cyprus, Siberia, Western Australia; read to Canadian Mng. Inst.].—Mining & Engg. World, Dec.30,1911, p. 1312; 750 w; 10c.

Denis, T. C.—*The Mineral Industry in the Province of Quebec During* 1911.—Canadn. Mng. Jnl., Jan.1,1912, p. 23; 2000 w; 25c.

Diller, J. S.—*Production of Asbestos in* 1911].—U. S. and imports].—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 9 pp.; 10c.

Kohn, H. S.—*Wertschätzung des Asbestes im Mittelalter;* [Utilization of asbestos in Greco-Roman and medieval ages].—Chemiker Ztg., Jan.9,1912, p. 31; 200 w; 35c.

Kryshanofsky, W. F.—*Serpentine Asbestos Deposits in the Berezowa, Kamenskaya and Manetnaya Estates, Ural, Russia.*—Canadian Mng. Inst., Bull. 18, Feb.,1912; p. 13; 800 w; $1.20.

Jamison.— *Wyoming,* 1911.—See Wyoming.

Rhodesia Chamber of Mines.—*Tables of Monthly Output.*—See under Rhodesia.

Skinner, R. P.; J. H. Snodgrass, and others. —*Asbestos in Foreign Countries;* [Hamburg and Bavaria districts, Germany; Switzerland; England; Russia; Italy; Rhodesia;

Canada; U. S.]—U. S. Consul. Rep., Apr. 18,1912; pp. 241-245; 20c.

———. *Asbestos Production in the Urals*, 1911.—Mining & Engg. World, Apr. 27,1912; p. 902; 150 w; 10c. Also in E. & M. J., May4; p. 886; 25c.

———. *Asbestos in the United States;* [Brief notes on production and imports in 1911].—Mng. Sci., Jan.25,1912, p. 69; 300 w; 25c.

———. *Giacimento di amianto di Monte Aspro;* [Asbestos deposits of Monte Aspro, Sardinia].—Rassegna Mineraria, Apr.11, 1912; p. 214; 500 w; 40c.

Asphalts and Bitumens

MINERAL ASPHALTS, ETC.

See also Amber.

Denby, Chas.—*Ozocerite and Ceresin;* [Notes on Austrian and Utah deposits].—U. S. Consul. Rep,, April2,1912; p. 24; 750 w; 20c.

Garrett, F. C.—*An Examination of Some Bituminous Minerals;* [Chiefly Trinidad petroleums and pitches].—Soc. of Chem'l Ind'y, Jnl.; Apr.15,1912; p. 314; 2500 w; tables; 65c.

Gawalowski, A.—*Der Asphalt argentinischer Herkunft;* [Note on a sample of asphalt from the San Juan district, Argentina].—Allgm. Oestr. Chemiker Ztg., March 15,1912; p. 47; 250 w; 45c.

Gonzalez, etc.—*Mining Industry of Hidalgo;* [Grahamite].—See under Mexico (Hidalgo).

Graefe, Edm.—*Ueber die Gewinnung des Trinidadasphalts;* [Methods of extraction of asphalt in Trinidad].—Chem. Industrie, March15,1912; p. 175; 1600 w*; 50c.

Haeberle, A. T.—*Mines and Minerals of Honduras;* [Includes note on gilsonite deposit].—U. S. Consul. Rep., March22,1912; p. 1171; 2000 w; 20c. Abstract in Los Angeles Mng. Rev., Apr.6,1912; p. 14; 2000 w; 20c. Also in Mex. Mng. Jnl., June, p. 31; 2500 w; 25c.

Kirschbraun, L.—*Asphalts; Sources of Supply and Methods of Preparation;* [Trinidad, Bermudez and Cuban asphalt; Utah gilsonite; from Westn. Soc. of Engrs., Jnl.; May,1912].—Engg. & Contractg., June12, 1912; p. 661; 4000 w; 20c.

Nicholson.—*Cuba as a Mining Country.*—See under Copper.

Koss, A. K.—*Untersuchung des Boryslawer Ozokerits;* [The Boryslav ozokerite deposits].—Russ. Phys-Chem. Ges., Jnl., 1911, pp. 846-855.

Brief review in Petroleum, Nov.1,1911, p. 109; 300 w; 45c.

Noth, J.—*Das Erdöl- und Erdwachsvorkommen von Boryslav-Tustanovicz in Galizien und die Ursachen der Verwässerung, etc.;* [The oil and mineral wax occurrences and cause of the flooding of the Boryslav-Tustanovicz oil field, Galicia; read to Geol. Ges. Wien; abstract].—Organ d. . . Bohrtechniker, March1,1912; p. 49; 4000 w*; 45c.

Penrose, R. A. F.—*Kauri Gum Mining in New Zealand.*—Jnl. of Geol'y, Jan.-Feb., 1912; p. 38-44*; 80c.

Perrenet, L.—*La fabrication de l'asphalte artificiel;* [The manufacture of artificial Travers asphalt at Couvet, Switzerland].—Rev. de Mét'l'gie, Jan.,1912, p. 50; 600 w; $1.15.

British Patent Office.—*List of Works on Peat, Mineral Oils;* [Bitumens, Asphalts, etc., in the Library].—London,1911, p. —; 50c; (pamphlet).

———. *Auslandshandel und Zölle in der Bitumen Industrie;* [Imports, exports, and tariff duties of the leading countries on asphalts and bituminous products, 1907-1911].—Bitumen, Apr.16,1912; p. 113; 2700 w; 35c.

———. *Growth of Asphalt Industry in California.*—Oil Age, Dec.15,1911, p. 1; 800 w; 20c.

———. [*Photographs and photomicrographs of asphaltic-limestone quarries and asphaltic limestones in the Swiss and Italian Alps*].—Zts. f. prakt. Geol., April,1912; p. 164; 10 figs.; $1.25.

———. *What Is Asphalt?* [Describes Bermudez deposits, Venezuela, and industrial uses].—Pan-American Union, Bull.; March,1912; pp. 328-343*; 35c.

COAL, COKE AND PEAT BY-PRODUCTS

Cohen, J. B.—*Paraffins from a Yorkshire Coal Seam.*—Soc. of Chem'l. Ind'y, Jan.15, 1912; p. 12; 2700 w; 65c.

Fischer, E. J.—*Die kunstlichen Peche und Asphalte;* [The artificial pitches and asphalts].—Kunststoffe, Vol. 1, 1911, pp. 421-423; 447-453; 471-474; $1.50.

Hubbard, P.—*American Coke-Oven Tars;* [Applicability as road-binding bitumens].—U. S. Office of Public Roads, Circular No. 97, January,1912; 11 pp.; 20c. Abstract in Engg. Record, Feb.24,1912; p. 207; 850 w; 25c. Also abstracted in Engg. & Contractg., March13,1912; p. 292; 1200 w; 20c. Also in Chem'l. Engr., March, p. 92; 3600 w; 35c. Also in Canadian Engr., Apr. 25, p. 573; 1600 w; 30c.

TESTING; CHEMISTRY; PREPARATION

Barta, L.—*Zur Bestimmung des Erweichungspunktes von Asphalt;* [Determining the softening point of Asphalts].—Petroleum, Nov.15,1911, p. 158; 500 w; 50c.

Breth, F.—*Ueber den Einfluss der Probenahme auf die Bestimmung des Stockpunktes von Paraffin;* [Significance of proper sampling in determining the value of paraffine for candle-making].—Petroleum, Nov. 1,1911, p. 106; 500 w; 45c.

Epstein,F., and Polonyi, H.—*Zur Untersuchung von Paraffin;* [The sampling and testing of paraffin].—Petroleum, March6, 1912; p. 594; 1500 w; 45c.

Forward, C. B.—*Process of Asphalt Manufacture* [From petroleum residues or from crude petroleum].—Salt Lake Mng. Rev., Jan.30.1912; p. 29; 1000 w*; 25c.

Fulweiler, W. H.—*Determination of Free Carbon in Bituminous Compounds by a Centrifugal Method;* [Read to Amer. Asso. f. Adv. of Sci.].—Engg. & Contractg., Jan. 31,1912, p. 122; 750 w; 25c.

Lach, Béla.—*Die Ceresinfabrikation;* [The manufacture of ceresin].—Halle, 1912; pp. —; 49 figures; $3 (book).

Landsberg, L. and K. Wolter.—*Verfahren zur Gewinnung von bei gewöhnlicher Temperatur festen Kohlenwasserstoffen;* [Recovery of solid hydrocarbons, paraffines and heavy oils, from petroleums at ordinary temperatures, German Pat. No. 241,528].—Allgm. Oestr. Chemiker Ztg., Feb.15,1912; p. 29; 750 w; 45c.

Löbel, Rud.—*Beiträge zur Kenntnis des Torfteers;* [The peat tars].—Hannover, 1911 (Techn. Hochschule dissert.].— 44 pp; (thesis).

Loebell, H.—*Zur Untersuchung von Asphalten;* [The examination of asphalts].—

Chemiker Ztg., Jan.2,1912, p. 4; Jan.6, p. 22; 4200 w; 50c.

Marcusson, J. and G. Meyerhein.—*Untersuchung von Erdöl- und Schwelparaffin;* [Tests of some commercial paraffins to distinguish between those of petroleum origin and of lignite, oil-shale or peat origin; abstract from Kgl. Materialprüfungsamt, 1911, No. 7-8].—Techn. Blätter, Feb.10, 1912; p. 46; 500 w; 45c.

Meissner, W.—*Internationale Vereinheitlichung der Zähigkeitsbestimmungen;* [International uniformity in determining viscosity or tenacity in petroleums and derivatives].—Petroleum, Jan.17,1912; p. 405; 1000 w; 45c.

Schwarz, F.—*Verfahren zur Bestimmung des Asphaltgehalts von Mineralölen, Erdölpechen, etc.;* [Process of estimating asphalt content of petroleum, oil pitches, etc.].—Chemiker Ztg., Dec.23,1911, p. 1417; 3000 w; 35c.

Sommer, F.—*Ueber die Anwendung der Formolitreaktion in der Paraffinanalyse;* [Application of the formolite reaction in paraffin analysis].—Petroleum, Jan.17,1912; p. 409; 1500 w; 45c.

———. *Untersuchungen von Bitumen Materialen und Rohpappe;* [Tests of bitumens, etc., by the Kgl. Materialprüfungsamts at Grosslichterfelde near Berlin in 1910].—Bitumen, Jan.1,1912, p. 7; 1200 w; 35c.

USES

Bergwald, F.—*Ueber Verwendung von Asphalt Emulsionen;* [The use of asphalt "emulsions"].—Bitumen, Jan.16,1912, p. 21; 750 w; 35c.

Blanchard, A. H.—*Use of Bitumens for Roads;* [Read to Amer. Asso. f. Adv. of Sci.; abstract].—Municipal Jnl., May15, 1912; p. 750; 3000 w; 20c. Also in Engg. & Contractg., May29, p. 606; 3000 w; 20c. Also in Engg. News, June6, p. 1065; 4500 w; 25c.

Drowne, H. B.—*Distributing Machines for Applying Bituminous Material;* [Read to Amer. Asso. f. Adv. of Sci., Section D; abstract].—Engg. & Contractg., Feb.7,1912; p. 159; 1700 w; 20c.

Harrington, W. G.—*An Improved Distributor for Heavy Road Binders.*—Engg. News, March14,1912; p. 488; 1000 w*; 20c.

Hubbard, P.—*Bituminous Roads and Pavements and Their Materials of Construction.*—Franklin Inst., Jnl., April,1912; pp. 343-362*; 65c.

Johnson, A. N.—*Nozzle for Spraying Bitumens on Macadam Roads;* [Read to Indiana Engg. Soc., abstract].—Engg. Record, March9,1912; p. 259; 600 w*; 20c.

Johnson, A. N.—*Bituminous Macadam;* [Read to Indiana Engg. Soc.; abstract].—Municipal Jnl., Feb.1,1912, p. 162; 4000 w; 20c.

Kuelling, H. J.—*Use of Bitumens on Wisconsin Roads.*—Wisconsin Engr., March, 1912; pp. 262-271; 35c.

Postle, K. F.—*Costs of Constructing and Maintaining Petrolithic Roads and Streets. Together with Data on other Liquid Asphalt Roads.*—Engg. & Contractg., May1,1912; p. 492; 1800 w*; 20c.

Prouty, Wm. F.—*Dustless Roads and Bituminous Binders.*—Cassier's Mag., Jan., 1912, p. 73; 4000 w; 35c.

Pullar, H. B.—*Street Asphalt Paving Mixtures and Their Proper Handling;* [Read to Amer. Asso. Adv. Sci., Section D; abstract].—Engg. & Contractg., Feb.28, 1912; p. 242; 750 w; 20c.

Amer. Soc. of Civil Engrs.—*Bituminous Surface Treatment;* [Discussion].—Municipal Jnl., May16,1912; p. 753; 4500 w; 20c.

———. *Cost of Maintaining Asphalt;* [Costs in Rochester, Buffalo and Brooklyn, N. Y., for 16 to 20 years].—Municipal Jnl., Feb.1,1912, p. 166; 2600 w*; 20c.

———. *Methods Employed by the New York State Highway Department in Testing Road Stone and Bituminous Materials.*—Engg. & Contractg., Dec.20,1911, p. 662; 3000 w; 25c.

———. *Paving in* 1911; [Official statistics for over 500 American cities].—Municipal Jnl., March21,1912; p. 426-445; 25c.

GEOLOGY; GENESIS; CLASSIFICATION

Engler, C.—*Das Bitumen;* [Bitumens, their composition, nature and origin].—Chemiker Ztg., Jan.18,1912, p. 65; Jan.25, p. 82; 6000 w; 35c.

Holde, D.—*Zur Nomenklator-Frage der Bitumen;* [The nomenclature of the bitumens].—Petroleum, Apr.3,1912; p. 713; 1000 w; tables; 50c.

Marcusson, J.—*Zur Kenntnis der Asphalte;* [The natural and artificial asphalts, and their distinction; from Chem. Rev., Vol. 18,1911, p. 47; brief review].—Bitumen, Dec.1,1911, p. 366; 200 w; 35c.

———. *Asphalt;* [Asphalt; comparisons between some artificial preparations and probable genesis in nature].—Bitumen, Feb. 1,1912; p. 37; 2100 w; 35c.

———. *Die Klassifizierung der natürlichen und künstlichen Asphalte;* [Classification of natural and artificial asphalts].—Bitumen; Feb.1,1912; p. 33; 1600 w; 35c.

Barytes

See "Paints and Pigments."

Andrée, K.—*Notizen zur Geologie und Mineralogie Niedersachsens;* [Geologic and mineralogic notes on lower Saxony; two new baryte finds and zinc blende of Radau valley].—Niedersächs. Geol. Ver. zu Hannover, Jahresber, Vol. 3, 1911; pp. 84-89.

Gawalowski, A.—*Konstitutions- und Kristallwasser der Kalzium- und Baryumsulfate;* [Water of composition and of crystallization in calcium and barium sulphates].—Organ d. Bohrtechniker, Apr.1,1912; p. 53; 1000 w; 35c.

Routala, O.—*Ueber die Fabrikation der kopflosen oder Barytzündhölzer;* [Manufacture of headless or baryte matches].—Zts. f. angew. Chemie, Jan.5,1912, p. 14; 3000 w; 40c.

Tornow, Dr.—*Vorkommen von Flussspat und Schwerspat am Krux bei Schmiedefeld;* [Fluorspar and baryte deposits at Krux near Schmiedefeld, Thuringia].—Techn. Blätter, March9,1912; p. 74; 1000 w; 35c.

Tornow, Dr.—*Ueber die Genesis der Schwerspat- und Flussspatgänge des Thüringer Waldes;* [Genesis of the baryte and fluorspar veins of the Thuringian Forest].—Deu. Bergwerks Ztg., Suppl. No. 7; Dec. 9, 1911, p. 1; No. 8, Dec. 20, p. 1; 3000 w; 50c.

Bauxite

See also Aluminum, Chapter 3.

Ashley, G. H.—*Bauxite Mining in the State of Tennessee;* [From "Resources of Tennessee"].—Mng. Sci., Jan.4,1912, p. 8; 1800 w*; 20c. Also in Mines & Minerals, Feb., p. 419; 2500 w*; 35c. Also in Mining & Engg. World, March9, p. 557; 1600 w*; 10c.

Phalen, W. C.—*Bauxite and Aluminum;* [Production in U. S., 1911].—U. S. Geol. Surv., Mineral Resources f. 1911; 1912; 19 pp.; 20c. Abstract in Mining & Engg. World, May11, p. 997; 3000 w; 10c.

Borax

See Salines.

Calcium

See under Metals.

Corundum

See Abrasives.

Cryolite

See Fluorspar.

Diamonds

See Gems.

Emery

See Abrasives.

Feldspar

See "Quartz, Feldspars, Silicates." For potash from feldspathic rocks see under Potash.

Fertilizers

PHOSPHATES

Apfel, O.—*Untersuchung über die Löslichkeit von Alkaliphosphaten;* [Tests on the solubility of alkaline phosphates].—Darmstadt Techn. Hochschule dissert; 1911; pp. —; $1 (Thesis).

Barr, Jas. A.—*Tennessee Phosphate Practice;* [Prospecting, mining, treatment].—Amer. Fertilizer, Junel,1912; p. 37; 5000 w; 25c.

Bell.—13*th Annual Idaho Report.*—See under Idaho.

von Bernewitz, M. W.—*Manufacture of Superphosphate in Western Australia.*—Mng. & Sc. Press, Oct.28,1911, p. 551; 1000 w*; 20c. Abstract in W. A. Mng. etc. Jnl., Dec.23,1911, p. 5; 1000 w; 50c.

German abstract in Zentralbl. f. Kunstdünger-Ind., May21,1912; p. 154; 500 w; 35c.

Brown, L. P.—*Phosphate Deposits of the Rocky Mountain States.*—Amer. Fertilizer Handbook, 1912; p. 123-128; 2500 w*; $1.50.

Ch. P.—*Sur l'historique de l'industrie des superphosphates;* [Historical notes on the superphosphate industry].— Phosphate, March18,1912; p. 239; 1000 w; 35c.

Cameron, F. K.—*Waste and Conservation of Potash and Phosphoric Acid.*—Jnl. of Indl. & Engg. Chem'y, March,1912, p. 169; 4000 w; 65c. Abstract in Cheml. Engr., March,1912, p. 99; 2000 w. 35c.

Day, D. T.—*The Progress in Chemical Industry in the South.*—Manfrrs. Record, Feb.22,1912; p. 51; 3000 w; 65c.

Flegel, K.—*Die nutzbaren Mineralen Nordafrikas;* [Workable mineral deposits of northern Africa—Morocco, Algeria, Tripoli, Egypt.—Techn. Blätter, Jan.27,1912; p. 25; 5000 w; 35c.

Flegel, K.—*Die Phosphate von Algier und Tunis, Ihre Lagerstätten, etc.;* [The phosphates of Tunis; deposits, preparation and industrial significance].—Deu. Bergwerks Ztg., Suppl. No. 6, Nov.28,1911, p. 1; 2000 w; 50c.

Gavelle, P.—*Contribution à l'étude de l'analyse des superphosphates;* [Analytic methods for superphosphates; sampling; water solubility and water-citrate solubility].—Phosphate, Jan.8,1912, p. 34; 1500 w; 35c.

Gianno, Salv.—*I bacini minerari della Tripolitania; 1: Giacimenti di fosfato i di zolfo;* [Mineral deposits of Tripoli; 1: Phosphate and sulfur].—Soc. Ital. di Esplor., Boll. (Esplor. Commerciale), No. 10, Oct.,1911, pp. —. Abstract in Rassegna Mineraria, Dec.21,1911, p. 291; 1200 w; 35c.

Gilchrist, P. S.—*A Modern Fertilizer Factory;* [Describes ideal plant for treating 20,000 tons of acid phosphate per annum].—Amer. Fertilizer Handbook, 1912; pp. 75-84*; $1.50.

Glasenapp, M.—*Systematische Erforschung der zentralrussischen Phosphoritlagerstätten im Jahre* 1910; [Progress in the central Russian phosphate field in 1910].—Riga Ind. Ztg., Jan.15.1912, p. 5; Feb.15, p. 35; Feb.29, p. 54; March15; p. 67; 6000 w; 75c.

Ginestous, G.—*Esquisse géologique de la Tunisie;* [Geology and mining industry of Tunis].—Paris, 1912; 164 pp*; $2; (book).

Guermonprez, —. *Les phosphates des Antilles néerlandaises;* [Phosphate deposits of the Dutch West Indies].—Echo d. Mines, Jan.18,1912, p. 78; 300 w; 35c.

de Hautpick, E.—*Russian Phosphate Industry.*—Mng. Jnl., Junel,1912; p. 580; 1000 w; 35c.

Krusch, —. *Die Phosphatlagerstätten bei Es-Salt im Ostjordanlande;* [Phosphate deposits east of the Jordan].—Zts. f. prakt. Geol., Dec.,1911, pp. 397-406*; 75c.

Lassar-Cohn, —. *Palmaerphosphat und Phonolith, zwei neue Arten künstlicher Düngemittel; Palmaer phosphate and phonolite fertilizers;* read to Polyt. & Gewerb. Ver. in Königsberg; abstract].—Chemiker Ztg., Apr.2,1912; p. 364; 500 w; 30c.

Lücker, F.—*Eine neue Methode der Phosphorsäurebestimmung;* [New modification of the Lorenz molybdenum process of phosphate analysis; read to Niederrhein. Ges. f. Natur. & Heilkunde Bonn, Dec.,1911; brief abstract in] Chemiker Ztg., March7,1912; p. 260; 100 w; 25c.

Memminger, C. G.—*Phosphate Mining in Relation to the Fertilizer Industry;* [Developments in the Southern states].—Manfrrs. Record, Feb.22,1912; p. 55; 4000 w; 65c.

Reprint in Amer. Fertilizer, April6, p. 46; 3600 w; 25c.

Negre, G.—*Un nouveau gisement de phosphate français;* [New deposit of French phosphate in the Belemnitella quadratazone; read to Acad. d. Sci., Feb.5,1912].—Phosphate, March4,1912; p. 201; 250 w; 35c.

Patten, A. J., and C. S. Robinson.—*Neutral Ammonium Nitrate Solution;* [For determining available phosphoric acid].—Jnl. of Ind'l & Engg. Chem'y, June,1912; p. 443; 2000 w*: 65c.

Pietrusky, K.—*Die Phosphatindustrie der Vereinigten Staaten;* [The phosphate deposits of the U. S.].—Chemische Industrie, March1,1912; p. 134; 3000 w; 50c.

Pitaval, R.—*L'industrie minière tunisienne en* 1911; [Review of mineral production of Tunis in 1911].—Echo d. Mines, Apr. 29,1912; p. 514; 1000 w; 35c. Reprint in Soc. Amicale d. Mineurs de Douai, Bull.; May10, p. 282-286; 1000 w; 35c.

Porter, F. B.—*A Method for Testing Out Problems in Acid Phosphate Manufacture.*

—Jnl. of Ind'l & Engg. Chem'y, April,1912; p. 264; 500 w; 65c.

Rogers, A. F., and C. E. Postma.—*Remarks on the Chemical Composition of Apatite and Phosphate Rocks.*—Amer. Jnl. of Sci., May,1912; p. 475-482; 65c.

Schaller, W. T.—*Mineralogy of the French Phosphorites.*—U. S. Geol. Survey, Bull. 509; 1912; pp. 89-100; 10c.

Sellards, E. H.—*Florida State Geological Survey, Fourth Annual Report;* [for 1911].—Tallahassee, 1912; 175 pp*; 50c.

Söderbaum, H. G.—*Ueber die Nachwirkung einiger Phosphate;* [5-year tests of the influence of lime on phosphatic fertilizers].—Zentralbl. f. Kunstdünger-Ind., May7, 1912; p. 137; 500 w; 35c.

Stone, S. R.—*Phosphate Deposits and Mining Methods in the United States;* [Chiefly Florida, Tennessee, S. Carolina].—Mining & Engg. World, March2,1912; p. 511; 1600 w; 10c.

Sturtevant, L. H.—*Phosphate Grinding;* [Sturtevant ring-rolls].—Amer. Fertilizer, May18,1912; p. 46; 1200 w*; 25c.

French abstract in Phosphate, June24, p. 521; 750 w*; 35c.

Tschirvinsky, W.—*Zur Frage über die mineralogische Natur der russischen Phosphorite;* [Problem of inorganic origin of the Russian phosphate deposits].—N. Jahrb. f. Mineralog., etc., 1911, Vol. 2; pp. 51-75*; $1.

Tupper, C. A.—*Equipment of a Modern Phosphate Plant in Florida;* [Pierce works]. Mining & Engg. World, March9,1912; p. 547; 1200 w*; 10c.

Tupper, C. A.—*Modern Power Plants in Florida Phosphate District.*—Mining & Engg. World, Feb.3,1912; p. 291; 2100 w*; 10c.

Van Horn, F. B.—*The Production of Phosphate Rock in the U. S. in* 1911.—U. S. Geol. Surv., Mineral Resources f. 1911; 1912; 14 pp.; 10c. Reprint in Amer. Fertilizer, Junel, pp. 21-28; 25c.

Waggaman, W. H.—*A Report on the Natural Phosphates of Tennessee, Kentucky and Arkansas.*—U. S., 62d Congr., 2d Session: Senate Document No. 190; pp. 49-77*. Reprinted as Bull. 81 of U. S. Bureau of Soils, March20,1912; 36 pp*.

Waggaman, Wm. H.—*Memorandum on the Manufacture of Acid Phosphate in the Southern States.*—U. S., 62d Congress, 2d Session; Senate Doc. No. 190; 1912; pp. 107-111.

Wallace, T. A.—*Connetable Phosphate;* [Aluminum phosphate workings of Connetable and Redondo I'ds., W. Indies].—Amer. Fertilizer, Apr.20,1912; p. 64; 500 w; 25c.

Weeks, F. B.—*Phosphate Rock in the West:* [Review for 1911].—M. & S. P., Jan. 6,1912, p. 25; 600 w: 35c.

Winship, N.—*Phosphate Industry of Makatea.*—U. S. Consul. Rep., Jan.3,1912, p. 42; 500 w; 20c.

American Chemical Society—*Committee Reports on Fertilizer Legislation, Potash and Phosphate Analysis.*—Jnl. of Indl. & Engg. Chem'y, March,1912, pp. 223-225; 65c.

Ch. P.—*Les appareils modernes pour le broyages des phosphates;* [Modern grinding equipment for phosphates]. — Phosphate, March11,1912; p. 217; 1000 w*; 35c.

Ch. P.—*La fabrication du superphosphate; théorie de la solubilisation;* [Treatment of the impurities accompanying phosphates, for the manufacture of supers].—Phosphate. Feb.26,1912; p. 179; 1200 w; 35c.

———. *A Modern Plant;* [F. S. Royster Guano Co. plant at Baltimore, Md.].—Amer. Fertilizer, Feb.24,1912; p. 43; 1000 w*; 25c.

———. *Aegyptische Phosphat;* [Egyptian phosphate].—Zentralbl. f. Kunstdünger-Ind., Dec.7,1911, p. 396; 200 w; 35c.

———. *Die Düngemittel-Industrie Russlands im Jahre,* 1911; [Phosphate industry and sulphur-pyrite developments in Russia in 1911].—Zentralbl. f. Kunstdünger Ind., Apr.21,1912; p. 124; 800 w; 35c.

———. *Die Superphosphatindustrie Australiens;* [The superphosphate industry in Australia].—Chem. Industrie, Feb.1,1912; p. 80; 200 w; 50c.

———. *Die Superphosphate Industrie in Frankreich und ihre Verteidigung gegenüber den Angriffen in der französischen Kammer;* [The superphosphate industry of France, costs, and defense against burdens of legislative control].—Chem. Industrie, Feb.15,1912; p. 113; 500 w; 50c.

———. *Idaho,* 1911.—Mining & Engg. World, Jan.27,1912; p. 213; 1500 w; 10c.

———. *L'agriculture et les engrais dans la province d'Odessa;* [Agriculture and fertilizers in the Odessa district, Russia].—Phosphate, May6,1912; p. 379; 1600 w; 35c.

———. *Le Tonkin minier;* [Mining industry in Tonkin, French Indo-China, in 1910; abstract of governor's report].—Echo d. Mines, Apr.1,1912; p. 408; 2400 w; 35c. Also in Soc. Amicale d. Mineurs de Douai, Bull., Apr.10; p. 222; Apr.25, p. 228; 2400 w; 50c.

———. *Les gisements de phosphate de l'Amérique du Nord;* [Summary of America's leading phosphate deposits; Quebec, S. Car., Florida (maps); also Tennessee].—Phosphate, Feb.19,1912; p. 159; 1000 w*; 35c.

———. *Phosphate Industry of Makatea Ocean and Naura Islands.*—Amer. Fertilizer, Jan.13,1912, p. 56; 1500 w; 25c.

———. *Phosphate Rock in Tennessee;* [Review of producers, output, methods; from state report].—Amer. Fertilizer, Jan. 13,1912, p. 21; 1600 w; 25c.

———. *Phosphate de Tunisie;* [Statistics of phosphate shipments to countries from Tunis in 1909 and 1910].—Phosphate, Dec.25,1911, p. 987; 500 w; table; 35c.

———. *Production d'Algérie,* 1911.—Echo d. Mines, March11,1912; p. 306; 35c.

———. *Reference List for Phosphates;* [Bibliography of world's phosphate and guano deposits, slag phosphate, etc.].—U. S. Congress (62d), 2d Session, Senate Doc. No. 190; 1912; pp. 78-106.

———. *Shipments of Phosphate Rock,* 1911; [Statistics of Florida shipments by grades, ports, vessels and destinations].—Amer. Fertilizer, Jan.27,1912, p. 37-44; 25c.

———. *South Australia, July-Dec.,* 1911.—Mng. Jnl., May4,1912; p. 426; 35c.

———. *The New Savannah Plant;* [Factory of the Phosphate Mining Co.].—Amer. Fertilizer, Apr.6,1912; p. 42; 1000 w*; 25c.

———. *The Virginia-Carolina Chemical Co.*—Manfrrs. Record, Feb.22,1912; p. 100: 2500 w; 65c.

———. *Une exploitation de phosphates pebble en Amérique;* [The Prairie Pebble Phosphate Co. plant, Florida].—Phosphate, May13,1912; p. 397; 1000 w*; 35c.

———. *World's Phosphate Rock Production;* [annually 1888-1911, inclusive].—Mining & Engg. World, Apr.27,1912; p. 900; 200 w: table; 10c.

SLAG FERTILIZERS

Blome, H.—*Ueber die Konstitution der Thomasschlacke;* [Composition of Thomas basic phosphatic slag].—Zentralbl. f. Kunstdünger-Ind., March21,1912; p. 91; May21, p. 153; 2000 w; 50c.

Fleissner, H.—*Eisenhochofenschlacken, ihre Eigenschaften und ihre Verwendung;* Blast-furnace slags, their properties and uses].—Halle, 1911; pp. —*; (book).

Extraction on slag composition in Oestr. Zts. f. Berg- & H- wesen, Jan.20,1912; p. 29; Jan.27, p. 46; 8000 w*; 65c.

Hartleb, Dr.—*Beiträge zur Konstitution der Thomasschlacke;* [The chemical composition of Thomas-Martin phosphatic slag].

Remy, Th.—*Eignen sich feingemahlene Rohphosphate als Ersatz für Thomasphosphat?* [Are fine-ground raw phosphates a suitable substitute for Thomas phosphate? —Zentralbl. f. Kunstdünger Ind., Apr.21, 1912; p. 119; 1000 w; 35c.

Sjollema, B. and J. C. de Ruiter de Wiedt.—*Ist die Zitronensäurelöslichkeit ein richtiger Massstab für die Bewertung eines Thomasmehles;* [Is citrate-solubility a proper standard in valuation of Thomas phosphate?].—Zentralbl. f. Kunstdünger-Ind., Feb.21,1912, p. 51; 1000 w; 35c.

Steinweg, E.—*Die Konstitution des vierbasischen Kalkphosphates und seine Reduzierbarkeit durch kohlenstoffhaltiges und reines Eisen;* [Chemical constitution of tetra-basic lime phosphate and reduction by carbon-bearing and pure iron].—Metallurgie, Jan.8,1912, p. 28-40; 50c.

GUANOS

Dye, A. V.—*Bat Guano in Mexico.*—U. S. Consul. Rep., Feb.17,1912; p. 735; 200 w; 20c.

———. *Caribbean Guano Enterprise;* [Caribbean Guano Co., on islands south of Jamaica].—U. S. Consul. Rep., March4, 1912; p. 928; 150 w; 20c.

———. *Guano Export aus Peru;* [Peruvian guano exports, 1905-1910].—Zentralbl. f. Kunstdünger-Ind., Jan.7,1912, p. 51; 300 w; 35c.

———. *Guano Deposits of Mexican West Coast.*—U. S. Consul Rep., Dec.16,1911, p. 1387; 200 w; 10c.

———. *Guano Lager auf der Insel Assumption;* [Guano deposits of Assumption I'd, Aldabra group, Seychelles].—Zentralbl. f. Kunstdünger-Ind., March7,1912; p. 70; 1800 w; 35c.

Also in English in Amer. Fertilizer, March23; p. 54-58; 25c.

———. *Peruvian Guano.*—Peru Today, March,1912; p. 33; 1000 w*; 25c.

LIME

See Lime under "Cements, Etc."

Groud, Ch.—*Chaux en Agriculture;* [Lime in agriculture].—Rev. d. Matériaux, March, 1912; p. 31; April, p. 47; May, p. —; 6000 w*; $2.25.

Steglich, Dr.—*Was muss der Landwirt vom Kalke wissen;* [Things the farmer should know about agricultural lime; from Sächs. Landw. Ztg., 1911, p. 471].—Ton-Industrie Ztg., Jan.13,1912, p. 71; 300 w; 30c.

Stitt, J. S.—*Hydrated Lime on the Farm.* —Rock Products, March,1912; p. 33; 750 w; 25c.

Wheeler, H. J.—*Is the Recommendation that only Ground Limestone Should be Used for Agricultural Purposes a Sound and Rational One?*—Natnl. Lime Manfrrs. Asso., Proc. of Tenth Annual Meeting, Bull. 4; 1912; 20 pp.; 50c.

———. *La fabrication de l'ammoniaque et du sulfate d'ammoniaque au moyen de la cianamide de calcium;* [Manufacture of ammonia and ammonium sulphate from calcium cyanamide].—Phosphate, Feb.26, 1912, p. 181; 500 w; 35c.

———. *Schadet lösliche Kieselsäure im Düngekalk?* [Is soluble silica detrimental in lime fertilizers?].—Ton-Industrie Ztg., Jan.6,1912, p. 32; 300 w; 35c.

AMMONIUM SULPHATE

OTHER NITROGEN FERTILIZERS

See under "Coking By-Products, Etc.," Chapter 6. Also "Nitrates and Nitrogen," Chapter 7.

von Feilitzen, H.—*Zusammensetzung und Düngewert der Torfasche;* [Composition and fertilizer value of the ash of peat fuel]. —Zentralbl. f. Kunstdünger-Ind., March21, 1912; p. 86; 500 w; 35c.

Philip, H.—*Availability of Nitrogen in Peat for Agricultural Purposes;* [Reply to J. G. Lipman's 1909 report of N. J. Agric. College Experim. Station].—Amer. Peat Soc., Jnl; Jan.,1912; p. 172; 1200 w; $1.40.

Wolff, Dr.—*Ueber die neueren Bestrebungen zur Gewinnung von Gas und Ammoniak aus Torf;* [Newer developments in gas and ammonia production from peat; read to Ver. z. Fördg. Moorkultur (Deu.); brief abstract].—Chemiker Ztg., May2,1912; p. 496; 500 w; 35c.

———. *Die production von Torfdünger in den V. S. A.;* [Production of peat fertilizers in U. S. in 1910].—Zentralbl. f. Kunstdünger-Industrie, Jan.21,1912, p. 18; 200 w; 35c.

GENERAL; MISCELLANEOUS

Baker, E. L.—*Report on Analyses of Samples of Fertilizers Collected by the Commissioner of Agriculture,* 1911 [New York state].—N. Y. Agric. Experim. Station, Bull. No. 341; 1911; 101 pp.; $1.

Bowker, Wm. H.—*Plant Food: Its Sources, Conservation, Preparation and Application.*—Private publication; 1912; 52 pp. Notice in Jnl. of Indl. & Engg. Chem'y, March, 1912, p. 234.

Cameron, F. K. and others.—*Fertilizer Resources of the United States.*—U. S., 62d Congress, 2d Session, Senate Doc. No. 190; 1912; 290 pp*. Review in Amer. Fertilizer, Jan.13,1912; p. 42; 6000 w; 25c.

Frazer, R.—*Fertilizer Trade in Spain.*— U. S. Consul. Rep., Feb.27,1912; p. 840; 600 w; 20c.

Fritsch, J.—*Fertilizers: The Manufacture of Chemical Manures;* [Translation by D. Grant from the French].—London, 1911; 332 pp*; (book).

Grossman, H.—*Ueber die chemische Industrie in Italien;* [Chemical fertilizer industry in Italy].—Zentralbl. f. Kunstdünger-Ind., Dec.7,1911, p. 396; 1000 w; 35c.

Halligan, J. Edw.—*Fertility and Fertilizer Hints.*—Easton, Pa.; 1911; 143 pp*; $1.25 (book).

Kentucky Agricl. Experim. Station.— *Commercial Fertilizers.*—Ky. Agric., Ex. Sta., Bull. 152; 1911; 128 pp.; (analyses of 555 commercial fertilizers); 50c.

Krische, P.—*Der Weltkonsum an Handelsdüngemitteln und dessen Steigerungsmöglichkeit;* [The world's fertilizer consumption and possibilities of its increase].

—Chem. Industrie, Apr.1,1912; p. 197-204; 75c. Abstract in Riga Industrie Ztg., Apr. 15, p. 109; 1200 w; 35c.

Lunge and Berl.—*Testing Methods in the Chemical Industries* (in German).—See under Chemistry.

Rudnick, P.—*Fertilizer Chemistry, a Report of Progress;* [Chairman's address, Division of Fertilizer Chemists, Amer. Chem. Soc.; Dec.,1911].—Jnl. of Ind'l & Engg. Chem'y, April,1912; p. 304; 2500 w; 65c.

Wichern, G.—*Bericht über die Fortschritte der Düngerindustrie in den Jahren,* 1909-1911; [Report of progress in the fertilizer industry, 1909-1911 inclusive].—Chemiker Ztg., March26,1912; p. 329; March30, p. 354; April4, p. —; 4800 w*; 65c.

Wilke, Wm.—*Construction of Fertilizer Factories; II: Mill House.*—Amer. Fertilizer, Apr.20,1912; p. 44; June29, p. 70; 2000 w*; 50c.

———. *British Fertilizer Notes;* [Review for 1911].—Amer. Fertilizer, Jan.27, 1912, p. 21; 2100 w; 25c.

———. *Consommation des engrais chimiques en Italie;* [Consumption of fertilizers in Italy].—Phosphate, Jan.1,1912, p. 19; 1000 w; 35c.

———. *Lois, décrets, arrêtés et circulaires sur le commerce des engrais;* [Laws and regulations on the sale of mineral fertilizers; texts of various French laws].—Phosphate, Apr.1,1912; p. 279, and supplementary folder; 35c.

———. *Oesterreich Ungarn, Einfuhr und Ausfuhr;* [Imports and exports of artificial fertilizers in Austria-Hungary, 1911].—Zentralbl. f. Kunstdünger-Ind., May7, 1912; p. 138; 200 w; table; 35c.

———. *Probenahme von Handelsdüngemittel durch vereidete Probenehmer;* [Sampling of commercial fertilizers by authorized samplers; rules of Magdeburg conventions of Oct.10,1898, and Feb.17,1912].—Zentralbl. f. Kunstdünger Ind., Apr.21,1912; p. 123; 1500 w; 35c.

———. *Produktion der Italienischen Düngemittel-Industrie,* 1910 *und ihre Rentabilität;* [Production and profitability of the Italian fertilizer industry in 1910].—Zentralbl. f. Kunstdünger-Ind., March7,1912; p. 68; 500 w; 35c.

———. *The American Fertilizer Handbook.*—Philadelphia, 1912; 309 pp*; $1.50 (book).

———. *The Morris Fertilizer Works, Atlanta, Ga.*—Amer. Fertilizer, March9, 1912, p. 49; 1000 w; 25c.

———. *The Progress of the Fertilizer Industry;* [Compendium of patents issued in the U. S., 1843-1911, on fertilizer compounds and machinery].—Amer. Fertilizer Handbook, 1912; pp. 85-122: $1.50.

POTASH

See Potash, Chapter 7a.

Fluorspar and Cryolite

Bidtel, E.—*Valuation of Fluorspar;* [Practice in commercial analysis].—Jnl. of Ind'l & Engg. Chem'y, March,1912, p. 201; 1800 w: 30c.

Tornow, Dr.—*Vorkommen von Flussspat und Schwerspat am Krux bei Schmiedefeld;* [Fluorspar and baryte deposits at Krux near Schmiedefeld, Thuringia]. — Techn. Blätter, March 9, 1912; p. 74; 1000 w; 35c.

Tornow, Dr.—*Ueber die Genesis der Schwerspat- und Flussspatgänge des Thüringer Waldes;* [Genesis of the baryte and fluorspar veins of the Thuringian Forest].—Deu. Bergwerks Ztg., Suppl. No. 7; Dec.9, 1911, p. 1; No. 8, Dec.20, p. 1; 3000 w; 50c.

Fuller's Earth

Van Horn, F. B.—*Fuller's Earth in the South.*—Manfrrs. Record, Feb.22,1912; p. 69; 3000 w; 65c.

Middleton, J.—*The Production of Fuller's Earth in* 1911.—U. S. Geol. Surv., Mineral Resources for 1911; 1912; 7 pp.; 10c.

Phillips, Wm. B.—*The Production of Fuller's Earth in Texas.*—Mining & Engg. World, Dec.16,1911, p. 1218; 600 w; 10c.

Sellards, E. H.—*Florida State Geological Survey, Fourth Annual Report;* [for 1911].—Tallahassee, 1912; 175 pp*; 50c.

Wesson, D.—*Bleaching of Oils with Fullers Earth.*—Amer. Inst. Chem'l. Engrs., Trans., Vol. III, pp. 327-332.

Gems

DIAMONDS

Ball, S. H.—*Diamonds in the Belgian Congo.*—E. & M. J., Feb.3,1912; p. 268; 1500 w*; 25c.

Branner, J. C.—*A Hydrocarbon Found in the Diamond and Carbonado District of Bahia, Brazil.*—Amer. Jnl. of Sci., Jan.,1912, p. 25; 500 w; 65c.

Camsell, Chas.—*Diamonds in the Similkameen.*—Brit. Columbia Mng. & Engg. Record, Jan.,1912; p. 168; 2700 w; 35c.

Derby, O. A.—*Speculations on the Genesis of the Diamond;* [Abstract from Jnl. of Geol'y, 1911].—Mining & Engg. World, Apr. 13,1912; p. 821; 2000 w; 10c.

Diederich, H. W.—*Antwerp Diamond Trade Review;* [For 1911].—U. S. Consul. Rep., Feb.21,1912; p. 774; 750 w; 20c.

Doman, W. A.—*The Great Diamond Mines of South Africa.*—Afr. World Annual, Dec., 1911, p. 317-323*; 3600 w*; $1.50.

Fuller, J. T.—*The Arkansas Diamond Field.*—E. & M. J., Jan.6,1912, p. 6; 300 w; 25c.

Gardiner, C. Roe.—*History of the Diamond Fields of India, Brazil and S. Africa.*—Mining & Engg. World, Feb.17,1912; p. 403; March2, p. 513; 5500 w; 20c.

Grove, Dan.—*Diamonds, Their Occurrence at Copeton, N. S. W.*—Australian Mng. Standd., Apr.11,1912; p. 331; 1200 w; 35c.

Gunsaulus, E. N.—*New Diamond Diggings in the Transvaal;* [Bloemhof-Mooifontein].—U. S. Consul. Rep., Feb.3,1912, p. 535; 1800 w; 20c.

van der Ham, A.—*Elektrotechnische Skizzen aus dem Diamantbergbau Südafrikas;* [Applications of electricity in diamond mining in German SW. Africa].—E. T. Z., Feb.1,1912, pp. 101-104*; 75c.

Abstract in Elektrotechnik & Maschinen bau, March17,1912; p. 231; 750 w; 35c.

Harger, H. S.—*The Bloemhof and Mooifontein Diggings.*—S. Afr. Mng. Jnl., Nov.18, 1911, p. 363; Nov.25, p. 401; Dec.2, p. 440; 4200 w; 65c.

Howell, S. M.—*Crystallization of Carbon by Artificial Means.*—Met. & Chem'l. Engg., April,1912; p. 197; 2500 w*; 35c.

Pratt and Berry.—*N. Carolina,* 1908-1910. —See under N. Carolina.

Range, Paul.—*Diamant Produktion in Deutsch-Südwestafrika;* [Diamond production in German SW. Africa, 1911].—Bergwirtsch. Mittlngn., April,1912; p. 67; p. 68; 500 w; $1.

Spencer, L. F.—*The Larger Diamonds of S. Africa.*—Mineralogical Mag., Oct.,1911, p. —; 500 w; table; 65c.
Italian abstract in Rassegna Mineraria, Dec.21,1911, p. 293; 500 w; table; 35c.

di Villa, Edw.—*Diamonds in China* [Black diamonds].—M. & S. P., March16, 1912, p. 412; 200 w; 20c.

Williams, A. F.—*The Kimberley System of Rock Handling;* [Read to S. Afr. Inst. of Engrs; author's reply to discussion].—S. Afr. Mng. Jnl., May4,1912; p. 366; 2500 w; 35c.

Commissioner of Lands & Mines—*Gold and Diamond Industries of British Guiana.* —Georgetown, B. G.; 1911; 15 pp; 75c.

———. *African Diamonds; German West Africa's Output,* 1911].—Afr. World, Apr.13, 1912; p. 581; 300 w; 35c.

———. *Australian Diamonds.*—Mng. World (London), Dec.9,1911, p. 737; 500 w: 35c.

———. *Diamonds; Their Occurrence, Recovery, Treatment, Sale and Utilization.* —Mng. Jnl., May25,1912; p. 527; 3000 w; 35c.

———. *Diamanten; Vorkommen, Gewinnung Bearbeitung und Verwertung;* [Diamonds, their occurrence, extraction, dressing and valuation].—Zentral Verbd. Bergbau Betriebsl. Oestr., Zts., March15,1912; p. 157; April1, p. 183; 7000 w; 50c.

———. *Diamant gegen Karborundum;* [Diamond vs. carborundum in stone saws]. —Kohle & Erz, March25,1912; p. 294; 750 w; 35c.

———. *Diamonds in German S. W. Africa;* [Production in 1911-1912].—Mining &. Engg. World, June8,1912; p. 1190; 300 w; 10c.

———. *Diamond Mining in S. Africa;* [Review for 2d half-year 1911].—S. Afr. Engg., Jan.,1912; p. 3; 1500 w*; 35c.

———. *Diamond Taxation in German S. W. Africa;* [Revision of mining regulations].—S. Afr. Mng. Jnl., Feb.3,1912; p. 781; 500 w; 35c.

———. *Future of Madagascar.*—Mining & Engg. World, Dec.16,1911, p. 1221; 1000 w; 10c.

———. *Kolmanskop Diamond Mines;* [Report for 1911].—S. Afr. Mng. Jnl., Apr. 27,1912; p. 317; 3000 w; 35c.

———. *Mining in Cape Colony;* [Review of diamond diggings and mines in 1910].— S. Afr. Mng. Jnl., Dec.2,1911, p. 455; Dec.9, p.—; 2800 w; 50c.

———. *New Diamond Field Near Bloemhof, Transvaal.*—Mining & Engg. World. Apr.6,1912; p. 773; 1800 w; 10c.

———. *The Bloemhof Diamond Diggings.*—S. Afr. Mng. Jnl., Dec.23,1911, p. 563; 2400 w*; 35c.

———. *The Diamond Cutting and Polishing Industry;* [From S. Afr. Mng. Jnl.]. —Mining & Engg. World, Jan.20,1912, p. 122; 1400 w; 10c. Also in W. Australian Mng. etc., Jnl., Apr.6,1912; p. 5; 1200 w; 35c.

———. *The Diamond Fields of the Southwestern Transvaal;* [Bloemhof and Moolfontein].—Afr. World, Dec.23.1911. p. 399; Jan.13,1912. p. 572; Feb.3, p. 755; Feb.10, p. 22; 4800 w; 75c.

———. *The Mooifontein Diggings; and, The Year with De Beers.*—S. Afr. Mng. Jnl., Dec.16,1912, p. 524, p. 525; 2000 w; 35c.

———. *The Outlook for Diamonds;* [Review of S. African production].—S. Afr. Mng. Jnl., Dec.23,1912, p. 558; 1000 w; 35c.

———. *The Vaal River Diggers and Their Diamonds;* [Reviews meeting to obtain better prices].—Afr. World, June8, 1912; p. 255; 1600 w; 35c.

———. *The Year with Premier Diamonds;* [Review for 1911].—S. Afr. Mng. Jnl., Feb.3,1912; p. 791: 1100 w; 35c.

MISCELLANEOUS

Baker, H. D.—*Greenstone Discovery in New Zealand;* [Bowenite near Milford Sound, South Id.].—U. S. Consul. Rep., Feb.28,1912; p. 856; 800 w; 20c.

Birdwood, Geo.—*The Amethyst, Its Virtues and Its Name;* [from Roy. Soc. of Arts, Jnl.].—Mining & Engg. World, Dec. 16,1911, p. 1226; 700 w; 10c.

Bixby, M.—*Gem Minerals of Utah;* [Variscite, topaz, agate, baryl, garnet, corundum, tourmaline, amethyst, prosopite, obsidian, opal].—Salt Lake Mng. Rev., May 30,1912; p. 19; 1800 w*; 25c.

Butler, G. M.—*The Commercially Important Artificial Gems.*—Colo. Scient. Soc., Proc.; June,1912; p. 165-184; 65c. Abstract in Mng. Sci., June27, p. 546; 2800 w; 20c.

Caracristi, C. F.—*Facts and Legends of the Emerald.*—Mex. Mng. Jnl., June,1912; p. 33; 3500 w*; 25c.

Doermer, L.—*Künstliche synthetische Edelsteine;* [The artificial gem industry in Germany; read to Naturwissensch. Ver. Hamburg; abstract].—Chemiker Ztg., Feb. 20,1912; p. 200; 1000 w; 30c.

Hansen, C. C.—*Gold and Precious Stone Mining and Jewelry in Siam;* [Sapphires and rubies].—U. S. Consul. Rep., Apr.23, 1912; p. 320; 500 w: 20c. Reprint in Mining & Engg. World, June15, p. 1246; 10c.

Gonzalez, etc.—*Mining Industry of Hidalgo;* [Opal].—See under Mexico (Hidalgo).

Kunz, Geo. F.—*Precious Stones in* 1911. —E. & M. J., Jan.6,1912, p. 5; 1500 w; 25c.

Lacroix, A.—*Les recherches minières de Madagascar;* [Mineral resources of Madagascar].—Echo. d. Mines, Apr.15,1912; p. 456: 1200 w; 35c. Reprint in Soc. Amicale d. Mineurs de Douai; Bull.; Apr.25, p. 237; 1200 w; 35c.

Levat, D.—*Guide pratique du prospecteur à Madagascar;* [Practical guide for the prospector in Madagascar].—Paris, 1912; 132 pp.; 38 figs; map; $2.50 (book).

Loehr, A. von.—*Verhalten der Edelsteine und Perlen im ultra-violetten Lichte;* [Behavior of gem stones and pearls in ultraviolet light; read to Wiener Mineralog. Ges., March.1912: brief abstract in] Chemiker Ztg., May21,1912; p. 569; 150 w; 35c.

MacDonald, A. R.—*Queensland,* 1911.— See under Australia (Queensland).

Marriott, H. F.—*Mining in the Transvaal in* 1911.—E. &. M. J., Jan.6,1912, p. 84: 3000 w; 25c.

Merle, A.—*Explorations minières dans le centre et l'ouest de Madagascar;* [Mining explorations in the center and west of Madagascar].—Paris, 1912; 158 pp*; $2.50; (book).

Olden, Chas.—*Emeralds: Their Mode of Occurrence and Methods of Mining and Extraction in British Colombia.*—Instn. of Mng. & Met'l'gy, Bull. 87. Dec.,1911. p. 1-11: 5000 w*; 50c. Discussion, Bull. 88, Jan.,1912; pp 3-11.
Abstract of paper in Mng. Jnl., Dec.30, p. 1299; Jan.13, p. 57; 4500 w; 50c. Also in Engg. News, Feb.15,1912, p. 295; 1000 w; 25c.

Schaller, W. T.—*Crystallized Variscite from Utah.*—U. S. Nat. Museum, Proc. No.

1867; Vol. 41, pp. 413-430; Jan.31,1912; 50c. Also in U. S. Geol. Survey, Bull. 509, 1912; pp. 48-65; 10c.

Also in German in Zts. f. Krystallogr., Apr.,1912; pp. 321-342*; 75c.

Schaller, W. T.—*Crystallized Turquoise from Virginia.*—Amer. Jnl. of Sci., Jan., 1912; p. 35; 2000 w*; 65c. Also in U. S. Geol. Survey, Bull. 509; 1912; pp. 42-47; 10c.

Also in German in Zts. f. Krystallogr., Jan.,1912; pp. 120-125*; $1.20.

Smith, G. F. Herbert.—*Gem Stones.*—London, 1912; 312 pp*; $1.50 (book).

Spotswood, A.—*Occurrence and Uses of American Tourmalines;* [Describes chiefly Himalaya mines, San Diego county, Cal.]. —Mining & Engg. World, Dec.23,1911, p. 1280; 2000 w; 10c.

Thomas, C.—*Gem Engraving.*—Roy. Soc. of Arts, Feb.16,1912; p. 360; 8000 w*; 35c.

Thomas, E. S.—*The Mineral Industry of Egypt;* [Turquoise mining, ancient and modern, Sinai region].—Cairo Scient. Jnl., March,1912; p. 56; 2500 w*; 75c. Abstract in Mining & Engg. World, July13, p. 53; 900 w; 10c.

Thompson, H. L.—*Sapphire Cutting Tools;* [Substitution for diamonds in abrasives; abstract from "Amer. Machinist"].—Engg. Mag., April,1912; p. 105; 1000 w; 35c.

Watkins, S. L.—*The New Gem Mineral El Doradoite.*—Los Angeles Mng. Rev., Jan. 13,1912, p. 11; 400 w; 20c.

Graphite

Acheson, E. G.—*Deflocculation.*—Soc. of Chemi. Ind'y, Jnl., Dec.30,1911, p. 1426; 3800 w; 65c. Abstract in Jnl. of Ind'l & Engg. Chem'y, Jan.,1912, p. 63; 2400 w; 65c. Also in Australian Mng. Standd., Feb. 8, p. 120; 1800 w; 35c. Also in Faraday Soc., Trans. June, 1912; pp. 217-221.

Bastin, E. S.—*The Production of Graphite in* 1911; [Reviews graphite industry in U. S.; also Ceylon, Chosen-Korea, and Cuba; extended bibliographies].—U. S. Geol. Surv., Mineral Resources f. 1911, 1912; 38 pp*; 20c.

Extract on deposits near Dillon, Mont.—Mng. Sci., May30, p. 467; 1000 w*; 20c.

Cirkel, F.—*The Amherst, Quebec, Graphite Deposits.*—Canadian Mng. Inst., Bull. 17, Dec.,1911, pp. 107-116*; $1.20.

Abstract in Mining & Engg. World, Feb. 3,1912; p. 295; 2800 w; 10c. Also in Mines & Minerals, Apr.,1912; p. 573; 1600 w*; 35c.

German abstract in Erzbergbau, March 15, p. 83; 1500 w; 35c.

Flegel, K.—*Die wichtigsten Graphitlagerstätten der Welt und ihre wirtschaftliche Bedeutung;* [The world's leading graphite deposits and their industrial significance].—Techn. Blatter, March16,1912; p. 84; March 23. p. 91; 5000 w; 50c.

Glasenapp, M.—*Die Alibert Graphitgruben in Sibirien;* [The Alibert graphite mines in Siberia].—Riga. Industrie Ztg., Apr.30,1912; p. 123; 500 w; 35c.

de Hautpick, E.—*Siberian Tin and Graphite.*—Mng. Jnl., May25,1912; p. 512; 500 w; 35c.

Swinburne, U.—*Natal,* 1911.—See Natal.

———. *Future of Madagascar.*—Mining & Engg. World, Dec.16,1911, p. 1221; 1000 w; 10c.

———. *Michigan Graphite Production;* [Review, 1911].—Mining & Engg. World, Dec.16,1911, p. 1226; 200 w; 10c.

———. *Produccion y aplicaciones importantes del grafito artificial;* [Production and important uses of artificial graphite].—Rev. Minera, Jan.8,1912, p. 13; 600 w; 35c.

Gums (Mineral); Amber

See Asphalts.

Gypsum

Baumgartner, H. W.—*Directory of Portland Cement Manufacturers, together with Manufacturers of Gypsum and Lime,* 1912. —Chicago, 1912; 250 pp*; $1; (book).

Beyer, —. *Alaun und Gips als Mineralneubildungen und als Ursachen der chemischen Verwitterung in den Quadersandsteinen des sächsischen Kreidegebietes;* [Alums and gypsum as secondary minerals and as causes of the weathering and alteration of the Quader sandstone formation in the Cretaceous of Saxony].—Deu. Geol. Ges., Zts., Vol. 63, No. 4, 1912; pp. 429-467*; $1.

Burkhardt, W. — *Lösungserscheinungen am Anhydrit;* [Some solubility phenomena associated with anhydrite; abstract from Zts. f. Krystallogr. & Mineralogie, Vol. 50, No. 3].—Kali, May 15, 1912; p. 237; 500 w; 45c.

Gawalowski, A.—*Konstitutions- und Kristallwasser der Kalzium- und Baryumsulfate;* [Water of composition and of crystallization in calcium and barium sulphates]. —Organ d. Bohrtechniker, Apr.1,1912; p. 53; 1000 w; 35c.

Hume, W. F.—*The Gypsum Deposits of the Mariût Region;* [Mediterranean Egypt]. —Cairo Scient. Jnl., Feb.,1912; p. 43; 1000 w; 65c.

Jennison, Wm. F.—*Gypsum Deposits of the Maritime Provinces;* [With other occurrences, preparation, uses, etc.].—Canadn. Dept. Mines, Mines Branch Report No. 84; 1911; 171 pp*; 50c.

Abstract on Nova Scotia deposits in Canadian Mng. Jnl., Dec.15,1911, p. 795; Jan.1, p. 10; 9000 w*; 45c.

Knopf, Ad.—*The Sitka Mining District, Alaska.*—U. S. Geol. Survey, Bull. 504; 32 pp*; 10c. Abstract in Mining & Engg. World, Feb.24,1912; p. 457; March 2, p. 517; 8000 w*; 20c.

Moye, A.—*Das Gipsformen;* [Molding in gypsum].—Berlin, 1911; 37 pp*; 75c.

Moye, A.—*Hydratwasser und Gipsanalyse;* [Combined water in the analysis of gypsum].—Ton-Industrie Ztg., Apr.13,1912; p. 630; 500 w; 30c.

Moye, A.—*Technische Anwendungen der physikalischen Chemie; Tonwaren, Kalk, Gips, Cement;* [Technical applications of physical chemistry in the ceramic arts, lime, gypsum and cement].—Ton-Industrie Ztg., March2,1912; p. 373; 2400 w; 25c.

Opstaele, Geo. — *Exploitation platrière moderne en Egypte;* [A modern gypsum and plaster plant in the Mariouth region, Egypt].—Rev. d. Matériaux, Dec.,1911, p. 205; 3000 w*; 65c.

Parks, H. M.—*Resources of Oregon.*—See under Oregon.

Seliger, A. S.—*Eigenschaften des Gipses;* [Properties of gypsum].—Ton-Industrie Ztg., Jan.13,1912, p. 68; 500 w; table; 30c.

Surr, G.—*Some Difficulties in the Analysis of Gypsum.*—Mining & Engg. World, Feb.24,1912; p. 467; 800 w; 10c.

Webb, S. C.—*Gypsum Plaster on Metal Lath; The Behavior of Iron and Steel in*

Contact with Gypsum.—Rock Products, Apr., 1912; p. 48; 1500 w; 30c.

Deutscher Gyps-Verein E. V.—[*Abstracts of papers at fourteenth general meeting, Feb.*26,1912, *Berlin;* in German].—Ton-Industrie Ztg., Feb.20,1912; p. 291; March5, p. 400; 3500 w*; 45c. Also in Chemiker Ztg., Apr.2,1912; p. 361; 2000 w; 35c.

F. R. P.—*Plaster Patterns;* [Advocates substitution for wood].—Mech. World, March22,1912; p. 136; 1000 w; 35c.

———. *Der Gips in Sperenberg und seine technische Verwertung;* [Gypsum deposits at Sperenburg, Mark Brandenburg, and the associated gypsum industries].—Ton-Industrie Ztg., Jan.20,1912; p. 111; 1500 w; 25c.

———. *Die Gypsindustrie der Schweiz;* [The gypsum industry of Switzerland].—Ton-Industrie Ztg., Apr.6,1912; p. 606; 200 w; 25c.

———. *Hair in Plaster;* [Importance of this material in gypsum].—Rock Products, Dec.,1911, p. 54; 1200 w; 25c.

———. *New Mill;* [Kelly Plaster Co., Castalia, Ohio].—Rock Products, Apr.,1912; p. 47; 1000 w; 30c.

———. *Notes on Plastering;* [History in antiquity].—Slate Trade Gazt., May, 1912; p. 57; 500 w; 35c.

———. *The World's Greatest Gypsum Mill;* [U. S. Gypsum Co. mill and mines at Fort Dodge, Iowa].—Rock Products, Dec., 1911, p. 3, p. 54; 1500 w*; 25c.

Iodine

See Salines; also Potash.

Meerschaum

Dominian, L.—*Mining in Turkey in* 1911; [Asia Minor].—M. & S. P., Jan.6,1912, p. 58; 1000 w; 35c.

Reinhardt, A.—*Ueber Meerschaum und Meerschaum-Fundstätten bei Eskischehir in Kleinasien;* [Meerschaum and meerschaum deposits near Eskischehir, Asia Minor].—Petermann's Mittlngn., 1911; pp. 251-255*; 75c.

———. *Meerschaum Mining in Asia Minor.*—Mining & Engg. World, Jan.27, 1912, p. 160; 500 w; 10c.

Mica

Denis.—*Quebec,* 1911.—See Quebec.

Klautsch, A.—*Die wichtigsten Handelsglimmervorkommen, im besonderen die der deutschen Kolonien;* [The world's most important mica deposits, especially those of German Africa]. — Elektrotechn. Anzgr., 1911; pp. 983-984; 75c.

Lewis, G. H.—*Mica Mining in Wyoming;* [Brief note on developments in Albany county].—Mining & Engg. World, Feb.3, 1912; p. 289; 100 w*; 10c.

Michael, W. H.—*Primitive Method of Mining Mica in India;* [From U. S. Consul. report].—Mining & Engg. World, Jan.20, 1912, p. 120; 500 w; 10c.

Pratt, J. H. and H. M. Berry.—*The Mining Industry in North Carolina,* 1908-1910. —N. Car. Geol. Survey, Economic Paper No. 23; 1911; 134 pp; $1.

Sterrett, D. B.—*Descriptive Mineralogy of Mica;* [Different varieties; from Bull. 23 of N. Car. Geol. Surv.].—Mines & Minerals, May,1912; p. 625; 2000 w*; 35c.

Sterrett, D. B.—*The Production of Mica in* 1911; [in the U. S.].—U. S. Geol. Survey, Mineral Resources f. 1911, 1912; 9 pp.; 10c.

———. *The Mora Mica Deposits of New Mexico.*—Mining & Engg. World, May4, 1912; p. 950; 1200 w; 10c.

Magnesite

Dede, L.—*Zur Analyse des gebrannten Magnesits;* [The analysis of commercial burned magnesite].—Chemiker Ztg., Apr.13, 1912; p. 414; 1000 w; 30c.

Kern, Dr.—*Der Magnesit und seine technische Verwertung;* [Magnesite and its use and preparations].—Glückauf, Feb.17,1912; pp. 271-276; 45c.

Odriozola, A.—*Santander District, Spain.* —See under Zinc.

Schmatolla, E.—*Ein Magnesitvorkommen in Californien;* [Magnesites of the Sierra Nevadas, California].—Ton-Industrie Ztg., Feb.15,1912; p. 255; 250 w; 25c.

———. *Magnesite Deposits in Venezuela.*—E. & M. J., Apr.20,1912; p. 794; 200 w; 25c.

———. *Ueber Magnesit;* [Notes on the proper burning of magnesite].—Stahl & Eisen, Jan.24,1912, p. 25; 500 w; 75c.

Mineral Waters

Badermann.—*Mineralschätze Rumäniens;* [The mineral resources of Roumania].—Zts. f. Angew. Chemie, March22,1912; p. 576; 1500 w; 50c.

Boesel, R. C.—*Mineral Waters and Soft Drinks;* [Series of U. S. consular reports from Europe, Japan, Siam, S. Africa, French W. Indies].—U. S. Consul. Rep., May10, 1912; p. 545-554; 10c.

Dunn, E. J.—*Mineral Springs of Victoria.* —Australian Mng. Standd., Jan.4,1912; p. 6; 1000 w; 35c.

Fraga, E.—*Radioaktivität der Heilquellen Chiles;* [Radioactivity of the healing springs of Chile].—Leipzig, 1911; pp. —; 75c (pamphlet).

Frech, Fr.—*Schlesien's Heilquellen in ihrer Beziehung zum Bau der Gebirge;* [The mineral and healing springs of Silesia, and their relation to geologic structure].—Berlin, 1912; 101 pp.; $1; (book).

Henrich, F., and G. Bugge.—*Beiträge zur Kenntnis der Quellenabsätze (Sinter) der Wiesbadener Thermalquellen;* [The solid constituents of the Wiesbaden radioactive thermal springs].—Chemiker Ztg., Apr.27, 1912; p. 473; 800 w; 35c.

Henrich and Glaser.—*Ueber die gebräuchlichen Apparate zur Bestimmung der Radioaktivität von Quellen;* [Necessary apparatus for determining the radioactivity of springs].—Zts. f. angew. Chemie, Jan. 5,1912; p. 16-19; 75c.

Hintz, E.—*Chemische Untersuchung der Mineralquelle zu Fachingen;* [Chemical examination of the Royal Mineral Springs at Fachingen, Germany; Fresenius laboratory].—Wiesbaden,1911; 19 pp; 50c (book).

Jaczewski, L.—*Kritische Uebersicht der Materialen zur Erforschung der physischchemischen Natur der Wasserquellen;* [Critical review of the literature on the physicochemical nature of springs].—Kgl. Ungar. Geol. Reichsanst., Jahrb. XIX, No. 1; 1911; pp. — $1.25 (pamphlet).

Lohman, W. (editor).—*Kalender für Mineralwasserfabrikanten für* 1912; [Calendar for mineral water dealers and manufacturers, 1912].—Lübeck, 1912; pp. —; $1 (book).

Matz, A. H.—*The Export Products of German and Austro-Hungarian Spas.*—German Export Rev., March20,1912; p. 37; 2000 w*; 35c.

Sanchez, J. A.—*Nuevo metodo para la determinacion volumetrica de los carbonatos de sodio y de potasio en las aguas potables y minerales;* [New volumetric method for the estimation of sodium and potash carbonates in potable and in mineral waters].—Soc. Cient. Argentina, Anales, Oct.,1911; pp. 176-182; $1.15.

Step, J., and F. Dautwitz.—*St. Joachimsthal;* [St. Joachims Valley, Bohemia, and its uranium and radium industry].—Vienna, 1911; 107 pp*; $1; (book).

Weszelszky, J., and R. Frohner.—*Ueber Radioaktivität der warmen Quellen von Budapest;* [Radioactivity of the thermal springs at and about Budapest; read to Akad. d. Wiss., Budapest, Jan.,1912; brief abstract].—Chemiker Ztg., March23,1912; p. 325; 200 w; 30c.

———. *Der Radiumkurort in St. Joachimsthal;* [The radio-therapeutic sanitorium in St. Joachimsthal, Austria].—Oestr. Zts. f. Berg- & H-wesen, March9,1912; p. 135; 2000 w; 45c. Also in Montan Ztg., Apr.15, p. 143; 1200 w; 45c.

Nitrates and Nitrogen

See also Ammonium Sulphate under "Coking; By-Products;" etc. See also Fertilizers. For Nitric Acid see under Acids.

Blumenfeld, Bd.—*Der Jahresbericht über Chile Salpeter;* [Review of European chile nitrate industrie, 1911].—Zentralbl. f. Kunstdünger-Ind., Jan.21,1912, p. 20; 1800 w; 35c.

Bradbury & Hirsch, Ltd.—*Nitrate of Soda and Sulphate of Ammonia;* [Review for 1911].—Amer. Fertilizer, Feb.10,1912; p. 21-29; 7000 w; 25c.

Codesido, B. J.—*El ácido nitrico, su preparación electro-quimica y sus aplicaciones.*—Peru Direccion Fomento, Bol., Sept.,1911; pp. 41-52; 50c.

Courtagne, G.—*Notes bibliographiques sur l'azoture d'aluminium;* [Historical development and bibliography of the aluminum nitride industry].—Phosphate, Jan.8,1912, p. 39-41; Jan.22, p. 83-84; Jan.29, p. 103; 5500 w; 65c.

Crossley, A. W.—*Synthetic Ammonia and Nitric Acid from the Atmosphere;* [Lectures before Roy. Instn., April,1912].—Engnrg., May3,1912; p. 599; 1500 w; 35c.

Dobbelstein.—*Ausnutzung der Koksofengase zur Gewinnung von Salpetersäure aus dem Stickstoff der Luft;* [Utilization of coke-oven gases in manufacturing nitrates from atmospheric nitrogen].—Glückauf, Feb.24,1912; pp. 289-300*; 45c.

Dwyer, W. J.—*Nitrate of Soda in* 1911; [Review of American markets].—E. & M. J., Jan.6.1912. p. 37; 500 w; 25c.

Abstract in English in Iron & Coal Trades Rev., June 28, p. 1042; 2500 w*; 35c.

Groebl, A.—*Ueber die Salpetersäurebestimmung nach Pelouze-Fresenius;* [The Pelouze-Fresenius process for estimation of nitrates.]—München Techn. Hochschule Dissert., 1911; 52 pp; $1 (thesis).

Hanna, R.—*Chilean Nitrate Production and Shipments in* 1911; [3d quarterly report of Nitrate Propaganda; from U. S. Consular report].—Mining & Engg. World, June15,1912; p. 1242; 500 w; 10c.

Hanna, R.—*Chilean Nitrate Industry;* [2d quarterly report of Nitrate Propaganda].—U. S. Consul. Rep., Jan.26,1912, p. 426; 600 w; 20c.

Hartwell, B. L., and F. R. Pember.—*The Effect of the "Wet Process" on the Availability of Low-Grade Nitrogenous Materials;* [Leather, peat, etc.; read to Amer. Chem. Soc., Washington, D. C.; Dec.,1911]. Jnl. of Ind'l & Engg. Chem'y, June,1912; p. 441; 2000 w; 65c.

Headden, Wm. P.—*The Occurrence and Origin of Nitrates in Colorado Soils.*—Colo. Scient. Soc., Proc., Vol. X, Nov.,1911; pp. 99-122; 65c.

von Kéler, H.—*Die wichtigsten Fortschritte auf dem Gebiete der anorganischen Grossindustrie im Jahre* 1911; [The more important advances in the chemical industries in 1911; (2) nitric acid, nitrates and nitrides, ammonia and ammonium compounds, cyanicides, carbides, silicides, etc.]. —Zts. f. Angew. Chemie, March15,1912; p. 518; 5000 w*; 50c.

Kennedy, J. D.—*Government Bureaus and Potash;* [Includes notes on California deposits of potash, nitre and salines].—M. & S. P., May11,1912; p. 669; 1800 w; 20c.

Leather, J. W., and J. N. Mukerji.—*The Indian Saltpetre Industry.*—Agricl. Research Inst., Pusa, India; Bull. 24; 19 pp*; 75c.

French abstract in "Phosphate," March4, 1912; p. 129; 2000 w*; 35c.

German abstract in Zts. f. Sprengstoffw., March15,1912; p. 116; Apr.1, p. 126; 6000 w*; 50c.

Loew, O.—*Ueber die Assimilation von Nitraten in Pflanzenzellen;* [Assimilation processes for nitrates in plant cells].—Chemiker Ztg., Jan.16,1912, p. 57; 2000 w; 35c.

Martell, P.—*Zur Geschichte der chemischen Industrie in der Mark Brandenburg;* [History of the chemical industry in Mark Brandenburg; chiefly on alum and saltpeter in 18th and 19th centuries].—Chem. Industrie, Jan.1,1912; p. 2; 5000 w; 50c.

Martell, P.—*Die Salpeterindustrie in Chile;* [The saltpetre industry of Chile].—Zts. f. Sprengstoffwesen, May15,1912; p. 193; 1800 w; 35c.

Matignon, C., and Lassieur.—*Ueber die Bedingungen der Bildung von Magnesiumnitrid aus Luft;* [Requirements for preparation of magnesium nitride].—Chemiker Ztg., Jan.9,1912, p. 30; 300 w; 35c.

Montgomery & Co., W.—*Nitrate of Soda;* [Review for last semester, 1911].—S. Amer. Jnl., Jan.6,1912, p. 14; 2200 w; 35c. Also in Mng. Jnl., Jan.6, p. 31; 1000 w; 35c.

Neumann, R.—*Eine Vereinfachung bei der Stickstoff-Bestimmung;* [Simplification of nitrogen estimation].—Chemiker Ztg., June1,1912; p. 613; 2000 w; 35c.

Newsom, J. F.—*Chilean Nitrate Deposits.* [With discussion of methods of treatment]. —Mng. & Met'g'l Soc. of Amer., Bull. 46; March30,1912; p. 56-68; 50c. Abstract in Chem. Engr., Apr.,1912; p. 167; 2400 w; 35c.

Pennock, J. D.—*Losses of Combined Nitrogen;* [Utilization of coke-oven by-products and other sources of nitrogen].—Jnl. of Indl. & Engg. Chem'y, March.1912, p. 172; 4500 w*; 65c. Also in Chem. Engr., June,1912; p. 231; 3000 w; 35c.

Pitaval, R.—*Electrometallurgy and Electrochemistry,* 1911; [in French].—See Aluminum.

Poussin, L. de la V.—*Le salpêtre et chutes d'eau en Norvège;* [The nitrate electrochemical industry of Norway; read to Acad. d. Sciences, etc., de Rouen; abstract].

—Phosphate, May20,1912; p. 419; 500 w; 35c.

Radimsky, —. *Mineralische Produkte in Persien;* [Minerals and mineral resources of Persia; from German consular report]. —Montan. Ztg., Apr.1,1912; p. 124; 1000 w; 35c.
German abstract on sulphur and Chile saltpeter deposits in Zentralbl. f. Kunstdünger Ind., March21, p. 86; 400 w; 35c.

Scott, E. K.—*The Manufacture of Nitrates from the Atmosphere.*—Roy. Soc. of Arts, May17,1912; p. 645-667; 15,000 w*; 35c.

Sell, H.—*Ueber die Umwandlung von Kalkstickstoff in Cyanid;* [The transformation of calcium nitrate into cyanide].—Berlin Techn. Hochschule dissert., 1911; pp. —; (thesis).

Spiel, H.—*Ueber die Bildung von Stickoxyden bei der stillen elektrischen Entladung im Siemensrohr;* [The manufacture of nitrogen oxides by continuous electric discharge in the Siemens tube].—Vienna,1911; 55 pp*; $1.00 (book).

Sundt, Lorenzo.—*El orijen del Salitre en Chile;* [Origin of the sodium nitrate and saline deposits of Chile].—Soc. Nac. Mineria (Chile), Bol; Feb.,1912; 3 pp; $1.15.

Tausent, M.—*Vergleichende Versuche über die Oxydation des Stickstoffes in der Hochspannungsflamme;* [The oxidation of nitrogen in the high-tension flame].—Zts. f. Elektrochemie, May1,1912; p. 314; 4500 w*; 40c.

Wichern, G.—*Bericht über die Fortschritte der Düngerindustrie in den Jahren,* 1909-1911; [Progress in the technology of the fertilizer industry, 1909-1911; part 7: nitrates, cyanamides, ammonium sulphate]. —Chemiker Ztg., Apr.30, p. 482; 4200 w; 30c.

Winslow, A. A.—*Chilean Production of Nitrate;* [Figures for 1911].—U. S. Consul. Rep., Apr.3,1912; p. 39; 200 w; 10c.

A. M.—*A propos de l'emploi du nitrate de soude;* [The proper use of nitrate of soda as a fertilizer; theory and practice]. —Phosphate, Feb.12,1912; p. 137; 1800 w; 35c.

"Ch. P."—*Les progrès de la chimie et de l'industrie de l'azote en* 1910; [Progress of chemistry of nitrates and the nitrogen industry in 1910].—Phosphate, Dec.18,1911; p. 973; 1200 w; 35c.

———. *La fabrication industrielle de l'azote pur;* [Industrial manufacture of pure nitrogen; from Houille Blanche].—Rev. Indl. du Centre, Jan.13,1912, p. 7; 1000 w; 35c.

———. *Le officine elettrochemiche Dottor Rossi a Legnano;* [The Dr. Rossi electrochemical works for preparation of potassium chlorate and of atmospheric nitric acid].—Rassegna Mineraria, Feb.1,1912; p. 64; 2000 w; 45c.

———. *Nitrate of Soda in* 1911.—Chemi. Trade Jnl., Jan.20,1912; 3 pp; 35c.

———. *Nitrates from the Air;* [Plant of Southern Electrochemical Co., at Nitrolee, S. Car., for lime nitrate].—Manfrrs. Record, Feb.8,1912; p. 47; 750 w*; 25c. Also in Amer. Fertilizer, Feb.24,1912; p. 45; 750 w*; 25c.

———. [*Series of Analyses of Chile Nitrate Companies;* New Paccha & Jaspampa and the Santiago; the Angela].—S. Amer. Jnl., Jan.6,1912; Jan.20, p. 63; 3600 w; 35c.

———. [*Series of Analyses of Chile Nitrate Companies;* Anglo-Chilian; Colorado; Santa Rita; New Tamarugal Co.'s].—S. Amer. Jnl., Dec.9,1911, p. 687; Dec.16, p. 718; 5000 w; 50c.

———. *The American Fertilizer Hand Book.*—Philadelphia, 1912; 309 pp*; $1.50; (book).

———. *The Great Nitrate Fields of Chile;* [Abstract from Bur. of Amer. Republics publication].—Mex. Mng. Jnl., Jan., 1912, p. 35; 2400 w; 25c.

Paints and Pigments

See Barytes.

See also under "Sanitation," etc., for lead poisoning.

Barrett, F. P.—*Tests of Coal Tar Paint;* [Cunningham's rust proof mixture].—Engg. News, Feb.1,1912, p. 196; 1200 w; 25c.

Bucherer, H. T.—*Die Mineral-, Pflanzen-, und Teerfarben;* [The mineral, plant and coal tar colors].—Leipzig, 1911, pp. —; $1.50; (book).

Buskett, E. W.—*Process of Manufacturing Sublimed White Lead.*—Mining & Engg. World, Feb.17,1912; p. 393; 4500 w*; 10c.

Gardner, H. A.—*Paint Technology and Tests.*—New York, 1911, pp.—; (book).

Gardner, H. A.—*What Makes White Lead Chalk and How Chalking May Be Prevented;* [Read to Penn. State Asso. of Master Painters, Jan.,1912].—Franklin Inst., Jnl., Jan.,1912, pp. 73-79; 65c. Abstract in Chemi. Engr., Feb., p. 50; May, p. 189; 3000 w; 65c. Also in M. & S. P., Apr.20, p. 568; 1500 w; 20c.

Gardner, H. A.—*Recent Development in Paint Technology;* [Read to Amer. Inst. of Archts.].—Canadian Engr., June6,1912; p. 751; 6500 w*; 25c.

Hamilton, Dr. Alice.—*Pathological Conditions in the American White Lead Industry;* [from U. S. Bureau of Labor, Bull. 95].—Mng. Sci., Dec.21,1911, p. 554; 1000 w; 20c.

Kalkow, Dr.—*Die Bedeutung und historische Entwickelung der Bleiweissfabrikation;* [Historical development, present status and outlook for the white-lead industry; read to Ver. v. Freunden der Chemie & Physik, Frankfurt; brief abstract].—Chemiker Ztg., Apr.16,1912; p. 423; 1000 w; 35c.

Lange, O.—*Die Schwefelfarbstoffe, ihre Herstellung und Verwendung;* [The sulphur pigments; their production and applications].—Leipzig, 1912; pp. —; 26 figs; $7.50 (book).
Abstract (in German) on production and purification methods; in Chemiker Ztg., June18, p. 683; June22, p. 709; June25, p. 714; 7000 w; 50c.

Liebreich, E. and F. Spitzer.—*Ueber den Einfluss von Anstrichen auf das Rosten des Eisens;* [Influence of paints or preservative coatings on the rusting of iron].—Zts. f. Elektrochemie, Feb.1,1912; p. 92-99*; 40c.

Lunge and Berl.—*Testing Methods in the Chemical Industries* (in German.—See under Chemistry.

Miller, H.—*The White-Lead Problem;* [Development in countries of continental Europe; read to London Paint & Varnish Soc., Dec.14,1911; German abstract].—Chemiker Ztg., Feb.20,1912; p. 200; 1000 w; 30c.

Nagel, O.—*Bemerkungen über die Lithoponefabrikation und ihre mechanische Vervollkommung;* [The process of lithopone manufacture and mechanical up-to-dateness].—Zts. f. Angew. Chemie, March29, 1912; p. 617; 1800 w*; 50c.

Petit, G.—*White Lead and Zinc White Paints.*—London, 1911; 100 pp; $1 (book).

Rollandet, G. J.—*The Treatment of Zinc Sulphide as a Pigment.*—Mng. Sci., Dec.21, 1911, p. 557: 1000 w; 20c.

Sansone, A.—*Kompendium der Färberei Chemie auf wissenschaftlicher und praktischer Grundlage;* [Compendium of paint and pigment chemistry on the scientific and practical foundations].—Vienna and Leipzig, 1912; 326 pp; 67 figs.; $4.50; (book).

Warren, C. H.—*The Barite Deposits of Five Islands, N. Scotia.*—Econ. Geol'y, Dec., 1911, pp. 799-807*; 65c.

Zänker, W.—*Die Kalkulation und Organization in Farbereien und verwandten Betrieben;* [Computation and organization work in paint and dye plants and related industries].—Berlin, 1911; pp. x, 72; $1 (book).

———. *White Lead in* 1911.—E. & M. J., Jan.6,1912, p. 16; 1000 w; 25c.

———. *Wie wird Ockerfarbe hergestellt?* [Method of preparing ocher pigments].—SW. Deu. Ind. Ztg., Dec.9,1911, p. 988; 500 w; 35c.

Phosphate

See Fertilizers.

Phonolite

See Potash.

Potash

Baak, B.—*Jahrbuch der Deutschen Braunkohlen-, Steinkohlen- und Kali-Industrie,* 1912; [Directory of the lignite, coal and potash mines and affiliated works of Germany; 1912].—Halle; 1912; 246 pp*; $2 (book).

Beck, K. — *Petrographisch - geologische Untersuchung des Salzgebirges im Werra-Fulda-Gebiete der deutschen Kalisalzlagerstütten;* [Petrographic-geologic researches in the saline formations in the Werra-Fulda district of the German potash field].—Zts. f. prakt. Geol., April,1912; p. 133-159*; $1.25. Also, in abstract, in Kali, June1, p. 262; 1800 w; 45c.

Berge, A.—*Die Fabrikation von Bittersalz und Chlormagnesium als Nebenbetriebe der Chlorkalium und Kaliumsulfat-Fabrikation;* [The manufacture of magnesium sulphate (epsom salts) and magnesium chloride as by-products in the manufacture of potassium chloride and sulphate].—Halle, 1912; 67 pp.; 15 figs.; $1.50; (book).

Damman, G.—*Jahresbericht über Kali-Werte,* 1911; [Annual review on potash trade, 1911].—Kali Erz & Kohle, Jan.5,1912, p. 14; 4500 w; 35c.

Deutsch, Dr. — *Die wirtschaftlich-politische Bedeutung des Gesetzes über den Absatz von Kalisalzen;* [Industrio-political significance of the German potash law].—Kali, Jan.1.1912, p. 5-17; Jan.15. p. 33-42; Feb.1, p. 66-71; Feb.15, p. 88-95; March1, p. 107-112; $1.70.

Diener, F.—*Der Pfingstausflug der Bergschuloberklasse nach Sachsen;* [Excursion of the Bochum (Pfingsten) Mining School to the potash mines and mills at Nordhausen; describes mining and treatment processes].—Bergbau, Feb.1,1912; p. 63; 1500 w*; 35c.

Förster, B.—*Ueber die zur Aufsuchung von Steinsalz und Kalisalzen im Elsass ausgeführten Tiefbohrungen;* [Prospecting-Drilling the Tertiary beds of Alsace for Potash or Rock Salt].—Geol. L. A. Elsass-Lothringen, Mittlngn., 1911; 175 pp*; $2.00; (book).

Abstract in Organ d. Bohrtechniker, Jan. 1,1912, p. 4; 1800 w; 45c. Also in Kali, Feb.15, p. 77; 3000 w; 35c.

Giebel, H. A.—*Die Finanzierung der Kali-Industrie;* [Financiering and promotion in the German potash industry].—Karlsruhe, 1912; pp. —; $1.50; (book).

Hahn, O. H.—*German Mining,* 1911.—E. & M. J., Jan.13,1912; p. 124; 1500 w; 25c.

Knobloch, F.—*Deutschlands Kali Industrie;* [Atlas of the German Potash Industrie; 12 colored maps, 100x113 cms.].—Magdeburg, 1912; $20.

Krische, P.—*Der Absatz an deutschen Kalisalzen im Jahre* 1910, *nebst einem Ueberblick über die Entwickelung in den ersten* 50 *Jahren der Kaliindustrie;* [The production of German potash salts in Germany for 50 years, and consumption at home and abroad].—Kali, Dec.1,1911, p. 528-539; 5000 w; 45c.

Leather, J. W., and J. N. Mukerji.—*The Indian Saltpetre Industry.*—Agrici. Research Inst., Pusa, India; Bull. 24; 19 pp.*; 75c.

French abstract in "Phosphate," March 4, 1912; p. 129; 2000 w*; 35c.

German abstract in Zts. f. Sprengstoffw., March15,1912; p. 116; Apr.1, p. 136; 6000 w*; 50c.

Görres, K., and K. Kormann.—*Das Reichskaligesetz;* [The German Potash Law].—Charlottenburg, 1911; pp. —; (book).

Lehmann, M.—*Untersuchungen über den Chlorgehalt des Madgeburger Leitungswassers und des Elbwassers vom linken und rechten Ufer;* [Tests of the chloride content of the Magdeburg water supply along both banks of the Elb river].—Chemiker Ztg., March2,1912; p. 241; 1000 w; 25c.

Lehmann, M.—*Untersuchungen über den Kalk- und Magnesiagehalt im Magdeburger Leitungswasser;* [Effect of potash works on the lime and magnesia content of the water-supply of Magdeburg, Elb river].—Kali, Jan.1,1912, p. 3; 1200 w; 45c.

Lunge and Berl.—*Testing Methods in the Chemical Industries* (in German).—See under Chemistry.

Marx, E.—*Bauten der Kali-Industrie, System Hetzer;* [The Hetzer system of construction of potash works].—Kali, May1, 1912; p. 205; 1800 w*; 35c.

Mehner, H.—*Die Entwässerung und Verfestigung der Kali Endlauge;* [Dewatering and solidification of potash wastes, with reference to possible utilization in mine packing].—Kali, Feb.1,1912; p. 49-54*; 4000 w; 45c.

Méker, P.—*Soude, Potasse, Sels;* [Technology of the soda, potash and saline industries].—Paris, 1911; 246 pp; $1.50 (book).

Meuskens, C.—*Moderne Trocknungsanlagen für Kalisalze;* [Modern drying plants for potash salts].—Techn. Blätter, Feb.17, 1912; p. 49; June8, p. 190; 6000 w*; 50c.

Milgauer, J.—*Ueber die Verarbeitung der bei der Fabrikation von Konversionssalpeter sich ergebenden Mutterlaugen;* [Extraction of iodine from potash liquors and waste liquors in Austria].—Chemiker Ztg., March26,1912; p. 331; 2500 w; 35c.

Naumann, M.—*Zur Kenntnis der Salzlagerstätte von Glückauf-Sondershausen;* [The Glückauf-Sondershausen potash deposit, S. Hartz district].—Kali, March1,1912; p. 101; 2000 w*; 45c.

Picard, —. *Ueber den Untern Buntsandstein der Mansfelder Mulde und seine Fossilien;* [The lower Bunt sandstone formation in the Mansfeld basin and its fossils].—Kgl. preuss. Geol. L-A., Jahrb., Vol. 30, Pt. 1, No. 3; pp. 576-622*.

Piestrak, F.—*Die Salinen in Galizien und in der Bukowina;* [The salines of Galicia and Bukowina].—Oestr. Zts. f. Berg. & H-wesen, Feb.17,1912; p. 85; Feb.24, p. 103; 8000 w; 75c.

Reidemeister, C.—*Ueber Salztone und Plattendolomite im Bereiche der norddeutschen Kalisalzlagerstätten;* [Saline clays and dolomitic flagstones in the north German potash formations].—Kali, May15, 1912; p. 226; Junel, p. —; 7000 w*; 65c.

Rangel, M.—*Mineral Resources of Durango.*—See under Mexico (Durango).

Schaller, W. T.—*The Alunite-Beudantite Group;* [Mineralogic studies].—U. S. Geol. Surv., Bull. 509; 1912; pp. 70-76; 10c.

Schollenberger, C. J.—*Determination of Total Potassium in Minerals.*—Jnl. of Ind'l & Engg. Chem'y, June,1912; p. 436; 500 w*; 65c.

Schorrig.—*Moderne Transport- und Verlade-Einrichtungen für Kalisalze;* [Some modern loading, unloading and transport plants for potash salts].—Bergbau, Aug.31, 1911, p. 559; Sept.7, p. 75; 3000 w*; 45c. Also in Deu. Bergwerks Ztg., Suppl. No. 4, Nov.9,1911, p. 1; 1000 w*; 50c. Also in Dingler's Polytechn. Jnl., Apr.6, pp. 219-221*; 75c.

Surr, G.—*The Estimation of Potassium as Perchlorate.*—Mining & Engg. World, March16,1912; p. 605; 2200 w; 10c.

Wunstorf, W., and G. Fliegel.—*Die Zechsteinsalze des niederrheinischen Tieflandes;* [The Permian (Zechstein) salt and potash beds of the lower Rhine region].—Glückauf, Jan.20,1912, pp. 89-96*; 50c.

Zimmermann.—*Die Kaliindustrie und das Reichskaligesetz;* [The German potash industry and potash law].—Technik & Wirtschaft, May,1912; pp. 341-347; 75c.

American Chemical Society.—*Committee Reports on Fertilizer Legislation, Potash and Phosphate Analysis.*—Jnl. of Indl. & Engg. Chem'y, March,1912, pp. 223-225; 65c.

A. S.—*Salzerzeugung Deutschlands,* 1906-1910; [Statistics of production, consumption and exports of German salines, 1906-1910]. —Oestr. Zts. f. Berg- & H-wesen, Feb.3, pp. 61-66; Feb.10, pp. 76-79; tables; 75c.

———. *Deutschlands Kaliverbrauch;* [Germany's potash consumption].—Zentralbl. f. Kunstdünger-Ind., Dec.7,1911, p. 395; 500 w; 35c.

———. *Sur la délimitation et la puissance des nouveaux gisements potassiques de la Haute Alsace;* [Extent and thickness of the new potash deposits of upper Alsace].— Phosphate, Apr.29,1912; p. 362; 500 w; 35c.

———. *Ueber das Auftreten von Kalisalzen im nordwestlichen Westfalen;* [Occurrence of potash salts in northwestern Westphalia].—Kali, Apr.1,1912; p. 168; 1600 w; tables; 35c.

———. *Die amtlichen Quotenfeststellungen der Verteilungsstelle für die Kali-Industrie;* [The allotments for 1912 in the German potash syndicate].—Kali Erz u. Kohle, Dec.5,1911, p. 1223; 500 w; table; 35c. Also in Zentralbl. f. Kunstdünger-Ind., Dec.7, p. 394; 1000 w; tables; 35c.

———. *Die Frage der Kalisalzgewinnung in Oesterreich;* [The question of potash mining in Austria].—Zentralbl. f. d. Kunstdünger-Ind., Dec.21,1911, p. 409; 1000 w; 35c.

———. *Fragen der Kali Geologie und Chemie;* [Geological and chemical problems of the potash industry in Hannover].—Organ d. Bohrtechniker, March15,1912; p. 67; 1000 w; 35c.

———. *German Potash Dividends,* 1911. —Mining & Engg. World, March2,1912; p. 518; 200 w; table; 10c.

———. *German Potash Review,* 1911.— Amer. Fertilizer, Jan.27,1912, p. 54; 1200 w; 25c.

———. *Gesamtergebnisse in der Montanindustrie,* 1909-1910; *Salzbergbaubetriebe;* [Statistics of mining production in Germany in 1909 and 1910; salt works, salines, and including crude potash salts].—Kali, Erz & Kohle, May5,1912; p. 449; 1000 w; tables; 35c.

———. *Graf Posadowsky über die Schädigung der Flusslaufe durch Kalilaugen;* [Pollution of streams by wastes from potash works; discusses speech of Count Posadowsky in German Reichstag, March 20].—Kali Erz & Kohle, Apr.15,1912; p. 377; 1500 w; 35c.

———. *Kalisalzanalysen;* [Notes on analysis of potash salts].—Zentralbl. f. Kunstdünger-Ind., Dec.7,1911, p. 392; 500 w; 35c.

———. *Le officiene elettrochimiche Dottor Rossi a Legnano;* [The Dr. Rossi electrochemical works for preparation of potassium chlorate and of atmospheric nitric acid].—Rassegna Mineraria, Feb.1,1912; p. 64; 2000 w; 45c.

———. *Potash Imports into the U. S.;* [From statement of U. S. Bureau of Statistics].—Amer. Fertilizer, Dec.30,1911, p. 31; 600 w; 25c.

PHONOLITE; FELDSPATHIC ROCKS

Asehan, O.—*De l'utilisation de la potasse dans les rapakivi et les pegmatites;* [Potash extraction from the feldspars, pegmatites and "rapakivi" of Finland].—Phosphate, Apr.1,1912; p. 281; 300 w; 35c.

German abstract in Kali, May1,1912; p. 211; 1200 w; 35c.

Felber, A.—*Ueber die Düngefähigkeit des kieselsauren Kaliums im Phonolith;* [The fertilizer value of the potash silicate in phonolite].—Zts. f. angew. Chemie, Apr.19, 1912; p. 765; 1000 w; 35c.

Foote, H. W., and S. R. Scholes.—*The Extraction of Potash and Alumina from Feldspar.*—Jnl. of Ind'l & Engg. Chem'y, May, 1912; p. 377; 1200 w; 65c.

Geldmacher, M.—*Betrachtungen über die Düngerfähigkeit des kieselsauren Kaliums im Phonolith;* [The fertilizer efficiency of the potash silicate in phonolite].—Zts. f. angew. Chemie, Feb.16,1912, p. 292; 1000 w; 40c.

Kōzu, S.—*Preliminary Notes on Some Igneous Rocks of Japan, V; Potash-Rhyolite.*—Jnl. of Geol'y, Jan.-Feb.,1912; p. 45-48; 80c.

Lassar-Cohn, —. *Palmaerphosphat und Phonolith, zwei neue Arten künstlicher Düngemittel;* [Palmaer phosphate and phonolite fertilizers; read to Polyt. & Gewerb. Ver. in Königsberg; abstract].— Chemiker Ztg., Apr.2,1912; p. 364; 500 w; 30c.

Mitchell, G. E.—*Potash Deposits in America; Possibilities in Leucite Hills of Wyoming].*—Cassier's Mag., Apr.,1912; p. 291-301*; 35c.

Pfeiffer, Th., E. Blanck and M. Flügel.—

Die Bedeutung des Phonoliths als Kalidüngemittel; [Significance and value of phonolith as a source of potash fertilizer].—Landwirtsch. Inst. Univ. Breslau, Mittlngn., 1911, Vol. 6, No. 2; pp. 233-272.

Schneidewind, Dr.—*Versuche über die Wirkung des Phonoliths und Kalktrasses;* [Review of Schneidewind's tests on the fertilizer value of phonolith and trass at the Halle experiment station].—Kali, Apr.1, 1912; p. 173; 1000 w; 45c.

Schultz, A. R., and W. Cross.—*Potash-Bearing Rocks of the Leucite Hills, Sweetwater county, Wyoming.*—U. S. Geol. Survey, Bull. 512; 39 pp*; 10c. Abstract in Amer. Fertilizer, March23,1912; p. 39-47*; 25c.

Skinner, R. P.—*Phonolith as a Fertilizer* [in Germany].—U. S. Consul. Rep., Jan.31, 1912, p. 490; 500 w; 20c.

Stremme, H., and B. Aarnio.—*Die Verwendung des Leucitophyrs, "Phonolithmehls" als Kalisilikat;* [The use of leucitophyre or phonolite flour as a potash-silicate fertilizer].—Kali, Apr.1; pp. 153-161; 45c.

Thompson, F.—*Gewinnung von Kalisalzen aus Feldspat;* [Thompson process of extracting potash from feldspar; U. S. Pat. No. 995,105].—Zentralbl. f. Kunstdünger-Ind., Dec.7,1911, p. 398; 200 w; 135c.

———. *Phonolith Gewerkschaft Marksburg;* [Note on the Marksburg Phonolite Co.].—Zentralbl. f. Kunstdünger-Industrie, Jan.21,1912, p. 20; 400 w; 35c.

POTASH FROM SEA WEEDS

Cameron, F. K.—*Potash from the Pacific Kelps.*—Jnl. of Ind'l & Engg. Chem'y, Feb., 1912; p. 77; 1800 w; 65c.

Dewey, F. P.—*The Business Aspect of the Kelp Proposition.*—Jnl. of Ind'l & Engg. Chem'y, April,1912; p. 311; 1000 w; 65c.

Green, G. V. and H. S. Johnson.—*Potash Salts from Sea-Weeds;* [Tests of Atlantic and Pacific weeds for potash and iodine].—Cheml. Engr., Feb.,1912; p. 55; 4200 w; 35c.

Setchell, W. A.; G. B. Rigg; F. M. McFarland; J. W. Turrentine and others.—*The Kelps of the Coast of the United States;* [and technology of sea-weed industry, especially for potash; bibliographies].—U. S., 62d. Congr., 2d. Session; Senate Doc. No. 190; 1912; pp. 130-290.*

Turrentine, J. W.—*The Composition of the Pacific Kelps.*—Jnl. of Ind'l & Engg. Chem'y, June,1912; p. 431; 3500 w; 65c.

———. *Die ausserbergmannische Kaligewinnung;* [The non-mineral sources of potash].—SW. Deu. Industrie Ztg., Apr.16, 1912; p. 204; 1000 w; 35c.

———. *The Potash Resources of the United States;* [Possible utilization of Pacific coast weeds; U. S. Dept. of Agriculture statement].—Amer. Fertilizer, Dec.30,1911, p. 39; 1000 w; 25c.

SEARCH FOR POTASH IN U. S.

Barndt, V.—*Government Bureaus and Potash;* [Discusses development of potash undertakings in Railroad Valley, Nev.].—M. & S. P., May25,1912; p. 731; 500 w; 20c.

Breger, Carpel L.—*Review of Potash in the U. S. and Abroad in* 1911.—Mining & Engg. World, Feb.3,1912; p. 297; 3000 w; 10c.

Reprinted in Amer. Fertilizer, Feb.24, p. 37; 3000 w; 25c.

Also in German in Techn. Blätter, Apr. 13, p. 117; 1600 w; 35c.

Butler, B. S. and H. S. Gale.—*An Alunite Deposit near Marysvale, Utah;* [from U. S. Geol. Survey bulletin].—Mng. Sci., Dec.21, 1911, p. 550; 1300 w; 20c. Also in Salt Lake Mng. Rev., Dec.30,1911, p. 119; Jan. 30,1912, p. 13; 4500 w*; 40c. Also in Amer. Fertilizer, Dec.30,1911; March9, p. 39; 5000 w*; 35c. Also in M. & S. P., Feb. 3, p. 210; 2500 w*; 20c. Also in Mining & Engg. World, Feb.10, p. 352; 3600 w; 10c. Also in Amer. Fertilizer, March9, p. 39; 5000 w*; 25c.

Italian abstract in Rassegna Mineraria, Apr.1,1912; p. 194; 1000 w; 40c.

Cameron, F. K.—*The Fertilizer Resources of the U. S.*—U. S., 62d Congr., 2d Session, Senate Document No. 190; 1912; 290 pp*. Abstract in Amer. Fertilizer, Jan.13, p. 42; 600 w; 25c.

Cameron, F. K.—*Waste and Conservation of Potash and Phosphoric Acid.*—Jnl. of Indl. & Engg. Chem'y, March,1912, p. 169; 4000 w; 65c. Abstract in Cheml. Engr., March,1912, p. 99; 2000 w. 35c.

Fegan, H. J.—*Memorandum in re Saline Claims, Potash Deposits, etc.;* [Manner of legal location in U. S.].—U. S. 62d Congr., 2d. Session; Senate Doc. No. 190; 1912; pp. 126-128.

Kennedy, J. D.—*Government Bureaus and Potash;* [Includes notes on California deposits of potash, nitre and salines].—M. & S. P., May11,1912; p. 669; 1800 w; 20c.

Larsen, E. S.—*Alunite in the San Cristobal quadrangle, Colo.*—U. S. Geol. Survey, Bull. 530-B; 1912; 7 pp*; 20c.

Hamman, W. D.—*Potash Solutions in the Searles Lake Region, Cal.*—Mng. Sci., Apr. 25,1912; p. 372; May2, p. 391; 4500 w; 30c. Also in E. & M. J., May18, p. 975; 3000 w; 25c.

Loughlin, G. F.—*Potash Sources in the United States;* [Sea-weeds and rocks].—Science Conspectus, Jan.,1912; p. 45-52; 4000 w*; 75c.

Phalen, W. C.—*Potash Salts; Summary for* 1911; [Reviews potash, alunite, leucite and silicate, kelp, etc., developments in U. S.].—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 31 pp; 10c.

Abstract in Amer. Fertilizer, Apr.6, p. 21; Apr.20, p. 21; 8000 w; 35c. Also in Mng. Sci., Apr.18, p. 350; 1400 w; 20c. Also in Cheml. Engr., Apr., p. 139; 6000 w; 35c.

Phalen, W. C.—*Occurrence of Potash Salts in the Bitterns of the Eastern United States.*—U. S. Geol. Survey Bull. 530-B; 19 pp.; 10c.

Abstract in Amer. Fertilizer, Dec.30,1911, pp. 21-3; 20c.

Shell, A. R.—*Potash near Ely, Nevada;* [Railroad Valley deposits].—Mng. Sci., Apr. 11,1912; p. 333; 1000 w; 20c.

———. *Commercial Availability of Alunite;* [Methods of treatment for potash, alum and bauxite].—E. & M. J., March16, 1912, p. 564; 1000 w; 25c.

———. *Government Bureaus and Potash;* [Discusses Survey press bulletin announcing potash in Borax Lake district, Cal.].—M. & S. P., March30,1912; p. 460; Apr.20, p. 571; 3500 w; 30c.

———. *List of Alkali Crusts Containing 0.5% or More of Potash;* [in U. S.]; *and List of Patents for the Extraction of Potash Salts* [U. S. patents].—U. S., 62d. Congr., 2d. Session; Senate Doc. No. 190; 1912; pp. 124-125.

———. *Nevada Potash Laboratory;* [Bureau of Soils-Geol. Survey laboratory at Reno].—Amer. Fertilizer, March23,1912; p. 35; 1400 w; 25c.

———. *Potash Salines in "Borax Lake," Mohave Desert, Cal.;* [Press bulletin of U. S. Geological Survey and U. S. Bur. of Soils].—Mining & Engg. World, March30, 1912; p. 713; 1200 w; 10c. Also in Mng. Sci., March28, p. 293; 1000 w; 20c. Also in E. & M. J., March30; p. 643; 600 w; 25c. Also in Los Angeles Mng. Rev., Apr.6, p. 5; 1000 w; 20c. Also in Amer. Fertilizer, Apr.6, p. 35; 1200 w; 25c. Also in Canadian Engr., Apr.18, p. 543; 1200 w; 25c.

———. *The American Fertilizer Hand Book.*—Philadelphia, 1912; 309 pp*; $1.50; (book).

———. *The Reno Co-Operative Potash Laboratory;* [U. S. Dept. of Agriculture plant at Mackay School of Mines for testing supposed potashes].—M. & S. P., March 2,1912; p. 346; 1100 w; 15c.

KAYSER PROCESS

Jänecke, E.—*Ueber das Kaysersche Verfahren zur Gewinnung von Kochsalz;* [Kayser process of salt extraction from potash brines and potash wastes].—Chemiker Ztg., Jan.9,1912; p. 28; 2500 w; 35c.

Kaufman, L.—*Das Kaysersche Verfahren zur Beseitigung von Kali-Endlaugen in Anwendung des Honigmannschen Prinzips;* [The Kayser process of utilizing potash wastes by the Honigmann principle].—Kali, Feb.1,1912; p. 55-56; 900 w*; 45c.

Kayser, H.—*Ueber das Kaysersche Verfahren zur Gewinnung von Kochsalz;* [The Kayser process; some critical notes on Jänecke's paper].—Chemiker Ztg., Feb.1, 1912; p. 124; May2, p. 493; 3200 w; 50c.

Reimer, C. L.—*Ueber das Kaysersche Verfahren zur Herstellung von Siedesalz in seiner Beziehung zur Endlaugenfrage;* [The Kayser process of salt manufacture from potash brines and waste brines].—Kali, Jan.15,1912; p. 25-28; 3000 w; 45c.

Schrempf, J.—*Das Verfahren von Kayser zur Erzeugung von Kochsalz und Eingengung oder Verdampfung sonstiger Lösungen;* [Kayser process of salt manufacture and concentration or vaporization of salines].—Glückauf, Feb.3,1912; p. 186; 3500 w*; 50c.

Pyrite and Sulphur

See also Acids.

See also "Thermic Metallurgy," Chapter 11, and "Waste Disposition," Chapter 13, for sulphur in smelter fumes.

Allen, E. T.—*Sulphides of Iron and Their Genesis;* [Studies at Carnegie Inst. Geophysical Laboratory].—M. & S. P., Sept.30, 1911; p. 413; 3000 w; 20c. Abstract in Chem. Met. & Mng. Soc. of S. Africa, Jan., 1912; p. 287; 2100 w; 90c.

Allen, E. T. and others.—*Mineral Sulphides of Iron;* [Genesis in nature and artificially].—Amer. Jnl. of Sci., March, 1912; pp. 169-236*; 65c. Abstract in Mining & Engg. World, Apr.20,1912; p. 857; 4800 w; 10c.

Auzies, J. A. A.—*Sur le briquetage des minerais de fer;* [The briquetting of pyrite cinders as a source of iron ore].—Rev. de Mét'l'gie, Jan.,1912; p. 35; 1000 w; $1.15.

Azzolino, A. and G. Fiochhi.—*L'Industria solfifera siliciana;* [The sulphur industry of Sicily].—Rassegna Mineraria, Feb.1,1912; p. 61; 3500 w; 45c.

French abstract in Phosphate, Apr.29, p. 359; 1200 w; 35c.

Binda, J. L.—*Mines and Minerals of Macedonia;* [Chiefly pyrite and chromite; from U. S. consular report].—M. & S. P., Apr.13,1912; p. 535; 1200 w*; 20c.

Blanquier, J.—*La industria del azufre en Sicilia;* [The sulphur industry of Sicily].—Soc. Nac. Mineria (Chile), Bol; Feb.,1912; 34 pp*; $1.15.

Bonney, W. L.—*Sulfur Mines in Mexico;* [Cerritos, San Luis Potosi].—U. S. Consul. Rep., Jan.23,1912, p. 377; 300 w; 20c. Reprinted in Mex. Mng. Jnl., Apr.1,1912; p. 33; 25c. Also in Mining & Engg. World, Apr.27, p. 912; 10c.

Collins, H. F.—*Mining Conditions in the South of Spain;* [Labor, mining practice, regulations, etc., on pyrite mining].—M. & S. P., Jan.6,1912, p. 49; 4000 w; 35c.

Doss, B.—*Ueber die Entstehung der ökonomisch wichtigsten Schwefelkieslagerstätten;* [Origin of the world's important pyrite deposits; read to Versammlung Baltischer Naturforscher; Riga, Apr.14, 1912; brief abstract in] Chemiker Ztg., May 14,1912; p. 540; 300 w; 35c.

Dumas, W. C.—*Pyrites;* [Sources of supply, grades, values, etc.; read to Amer. Chem. Soc., Georgia section].—Amer. Fertilizer, March23,1912; p. 21; 1800 w; 25c. Reprint in Mining & Engg. World, Apr.13, 1912; p. 809; 10c.

German abstract in Erzbergbau, June1, p. 188; 1000 w; 35c.

Eddy, L. H.—*Thiogen Process Demonstration;* [Treating McDougal-roaster gases for sulphur at Penn smelter, Campo Saco, Cal.].—E. & M. J., May4,1912; p. 873; 1500 w*; 25c.

Italian abstract in Rassegna Mineraria, May21, p. 286; 500 w; 45c.

Flegel.—*Mining in Servia.*—See Copper.

Formenti.—*Industrial Wastes* [in Italian].—See under Waste Disposition.

[Frasch, H.].—*Presentation of the Perkins Medal to Herman Frasch;* [Reviews work on de-odorizing of Ontario petroleum and on Louisiana sulfur].—Met. & Chem'l. Engg., Feb.,1912, p. 73; 8000 w*; 35c. Also in Jnl. of Ind'l & Engg. Chem'y, Feb., p. 128-140; 8000 w; 65c. Also in Soc. of Chem'l Ind'y, Jnl., Feb.29, p. 169; 8000 w; 65c.

Abstract (in Italian) on Louisiana sulphur deposits; Rassegna Mineraria, March 11, p. 152; 2400 w; 35c.

Ganet, L.—*L'industrie et le marché des pyrites;* [Pyrite production, prices, grades, testing, etc.].—Echo d. Mines, May2,1912; p. 530; 2500 w; 35c.

Abstract in English in London Mng. Jnl., May25, p. 528; 500 w; 35c.

Gianno, Salv.—*I bacini minerari della Tripolitania; 1: Giacimenti di fosfato i di zolfo;* [Mineral deposits of Tripoli; 1: Phosphate and sulfur].—Soc. Ital. di Esplor., Boll. (Esplor. Commerciale), No. 10, Oct., 1911, pp. —. Abstract in Rassegna Mineraria, Dec.21,1911, p. 291; 1200 w; 35c.

Glasenapp, M.—*Die Pyrite Russlands;* [Pyrite resources of Russia].—Riga Ind. Ztg., July31,1911, p. 214; 2000 w; 35c. Abstract in Zentralbl. f. Kunstdünger-Ind., Jan.7,1912, p. 1; 1200 w; 35c.

Also in French in "Phosphate," July7, p. 590; 400 w; 35c.

Also in English in Mining & Engg. World, Oct.14,1911, p. 745; 1800 w; 10c. Also in Los Angeles Mng. Rev., Nov.11, p. 13; 1800 w; 20c.

Hewett, D. F.—*Sulphur Deposits in Sunlight Basin, Wyoming;* [Abstract from U. S. Geol. Survey Bull. No. 530, 1911].—Mng. Sci., June13,1912; p. 511; 1600 w; 20c.

Hugon, E. C.—*A Plant for the Enrichment of Pyritic Blende Concentrates;* [Magnetic separation after roasting. Pierrefitte mines, Pyrenees, France].—Instn. of Mng. & Met'l'gy, Bull. 92; May,1912; pp. 9*; 50c.

von Kéler, H.—*Die wichtigsten Fortschritte auf dem Gebiete der anorganischen Grossindustrie im Jahre* 1911; [Most important advances in the chemical industries in 1911; (1): sulphuric acid, also hydrochloric acid, chlorine and bleaching powder].—Zts. f. Angew. Chemie, March8,1912; p. 454; 5000 w*; 50c.

Kittl, E.—*Beitrag zur Kenntnis des Kieslagers "Panzendorf";* [The Panzendorf pyrite deposits].—Zts. f. prakt. Geol., Jan.-Feb.,1912; p. 95; 1000 w*; 75c.

Klason, P., and H. Mellquist.—*Jodometrische Methode zur quantitativen Bestimmung kleiner Mengen Selen in Schwefel und Kiesen;* [Iodometric methods of estimating small quantities of selenium in sulphur or in pyrites].—Zts. f. angew. Chemie, March 15,1912; p. 514; 4000 w*; 50c. Abstract in Chemiker Ztg., Dec.5,1911, p. 1345; 500 w; 30c.

Klugh, B. G.—*Turning Pyrite Cinders into Profit;* [Dwight-Lloyd sintering for recovery of iron].—Amer. Fertilizer, p. 54; 1000 w; 25c.

Knox, H. H.—*Criteria for Replacement Ore Bodies;* [Discusses abundance of replacement deposits, especially pyrites, in non-limestone formations].—Econ. Geol'y, April-May,1912; p. 295; 750 w; 65c.

Lange, O.—*Die Schwefelfarbstoffe, ihre Herstellung und Verwendung;* [The sulphur pigments; their production and applications].—Leipzig, 1912; pp. —; 26 figs; $7.50 (book.

Abstract (in German) on methods of production and purification; in Chemiker Ztg., June18, p. 683; June22, p. 709; June 25, p. 714; 7000 w; 50c.

Lucas, A. F.—*Geology of Calcasieu Mines and Sulfur-Oil Fields of the Coastal Plain;* [Address at presentation of Perkins medal to Dr. H. Frasch].—Met. & Chem. Engg., Feb.,1912, p. 80; 1200 w; 35c. Also in Jnl. of Ind'l & Engg. Chem'y, Feb., p. 140; 2800 w; 65c. Also in Soc. of Chem'l Ind'y, Jnl., Feb.29, p. 173; 2000 w; 65c.

Mace, C. H.—*Genesis of Leona Heights Ore Deposit, Cal.;* [Cupriferous pyrite near Oakland].—Mining & Engg. World, Dec.30, 1911, p. 1320; 1500 w; 10c.

Magee, J. G.—*New Zealand's Sulphur Deposits;* [White I'd., Bay of Plenty].—Australian Mng. Standd., Apr.25,1912; p. 380; 500 w; 35c.

Mastbaum, H.—*Gefährdung eines Dampfertransports durch Schwefelkies;* [Danger of shipping pyrite by vessel; change of Huelva cargo to sulfate on dampening].—Chemiker Ztg., Jan.9,1912, p. 30; 1100 w; 30c.

Phalen, W. C.—*Sulphur, Pyrite and Sulphuric Acid in* 1911; [Production in U. S., with "Notes on the Manufacture of Sulphuric Acid from Smelter Fumes at Ducktown, Tenn.," by F. B. Laney; pp. 24-30].—U. S. Geol. Survey. Mineral Resources f. 1911; 1912; 30 pp; 20c.

Pough, F. H.—*Sulphur Mines of the Union Sulphur Co. in Louisiana.*—Jnl. of Ind'l & Engg. Chem'y, Feb.,1912, p. 143; 1800 w*; 65c. Also in Society of Chem'l Ind'y, Jnl., Feb.29, p. 175; 1400 w; 65c.

Prévost, V.—*L'industrie minière de Huelva;* [Ore shipments from Huelva, Spain, in 1910].—Echo d. Mines, Dec.7,1911, p. 1260; 1000 w; 35c.

Radimsky, —. *Mineralische Produkte in Persian;* [Minerals and mineral resources of Persia; from German consular report].—Montan. Ztg., Apr.1,1912; p. 124; 1000 w; 35c.

German abstract on sulphur and on saltpeter deposits in Zentralbl. f. Kunstdünger ind., March21; p. 86; 400 w; 35c.

Ramén, A.—*Die neuesten Methoden zur Extraktion von Kiesabbränden und Kies;* [Newer developments in utilization of, and copper extraction from, pyrite and pyrite cinders; read to Polyteknisk Foren. Kristiania, Nov.29,1911; brief abstract in] Chemiker Ztg., Jan.9,1912, p. 33; 500 w; 35c.

Richard, Dr.—*Ofen zur sulfatisierenden Röstung kupferhaltiger Kiese;* [Oven for roasting cupriferous pyrite to obtain water-soluble copper sulphate].—Chemiker Ztg., May21,1912; p. 565; 1000 w; 35c.

Richards, R. W. and J. H. Bridges.—*Sulphur Deposits near Soda Springs, Idaho.*—U. S. Geol. Survey, Bull. 470-J; 1911; 1800 w*; 10c. Abstract in Mng. Sci., Sept.14, 1911, p. 254; 1800 w; 20c. Also in Mining & Engg. World, Jan.6,1911, p. 12; 1400 w; 10c.

Ruhoff, O. E.—*Magnetic Separation of Zinc-Iron Ores as Found in Southwestern Wisconsin;* [With recovery and sale of iron pyrite].—Met. & Chem. Engg., May,1912; p. 278; 3200 w*; 35c.

Wilson, F. L.—*Experiments with the Thiogen Process;* [Sulphur recovery from smelter and roaster fumes].—M. & S. P., Apr.6,1912; p. 497; 1800 w*; 20c.

———. *Bergbau und Hüttenindustrie Italiens im Jahre* 1910; [Review of mining and metallurgy in Italy, and production, in 1910].—Glückauf, Dec.16,1911, p. 1961; 4000 w; tables; 50c. Also in Montanist. Rundschau, March16,1912; pp. 251-4; tables; 45c.

———. *Bergbau und Hüttenindustrie Italiens im Jahre,* 1910; [Statistics of mine and smelter production in Italy, 1910].—Montanist. Rundschau, March16,1912; p. 251-254; tables; 45c.

———. *Spanish Imports and Exports,* 1911.—Iron & Coal Tr. Rev., Feb.23; p. 288; 500 w; 35c.

———. *Die Düngemittel Industrie Russlands im Jahre,* 1911; [Phosphate industry and sulphur-pyrite developments in Russia in 1911].—Zentralbl. f. Kunstdünger Ind., Apr.21,1912; p. 124; 800 w; 35c.

———. *Die Entwickelung der Schwefelsäureindustrie in England, den V. S., Deutschland, Russland, Italien und Frankreich,* 1910; [Development of the sulphuric acid industry in Germany, U. K., U. S., Russia, Italy, and France, 1910].—Chem. Industrie, Feb.1,1912; p. 78; 1600 w; 50c.

———. *"Fool's Gold."*—Resources of Tennessee, Feb.,1912; p. 69; 1400 w; 35c.

———. *L'industria solfifera siciliana;* [Sulphur industry in Sicily; notes on Consorzio report for 1911].—Rassegna Mineraria, March11,1912; p. 158; 1500 w; 35c.

———. *Per una proroga della durata del Consorzio obbligatorio per l'industria solfifera siciliano;* [The proposed renewal of the Consorzio of the Sicilian sulphur industry].—Rassegna Mineraria, Apr.11,1912; p. 209; 1000 w; 40c.

———. *Review of Sicilian Sulphur Industry in* 1911; [Consorzio's report for first 5 years].—E. & M. J., Jan.6,1912; p. 14; 500 w; 25c. Also in Amer. Fertilizer, Jan. 13, p. —; 500 w; 25c. Also in Mining & Engg. World, Feb.3, p. 300; 500 w; 10c.

———. *Sulphur in Northern Wyoming;* [Park county].—Mng. Sci., March14,1912, p. 254; 500 w*; 20c.

Quarts; Feldspar; Silicates

See also Meerschaum; also Mica; also Cements, etc.

For phonolite, and for potash from feldspar rocks, see under Potash.

Asch, W. and D.—*Die Silicate in chemischer und Technischer Beziehung;* [The silicates in their chemical and technical relations; and the Hexite-Pentite Theory and its Bearing on Stereochemistry].—Berlin, 1911, pp. 409; $5.00 (book).

German abstract in Kali, May1,1912; p. 211; 1200 w; 35c.

Benfey, G.—*Herstellung Feuerfester Erzeugnisse;* [The manufacture of refractory products].—Hannover, 1912; pp. —; $1.50 (book).

Berthelot, D.—*Fusione e lavoro del quarzo;* [The smelting and working of quartz glass and bearing on the application of ultra-violet rays; Italian abstract from Soc. d. Ingrs. Civils, France, Bull.; Dec., 1911].—Rassegna Mineraria, March21,1912; p. 173; 1800 w; 35c.

Billon-Daguerre, —. *La fusion de quartz pur au four électrique;* [The smelting of quartz in the electric furnace; read to Acad. d. Sci., Paris].—Jnl. du Four Electriq., March15,1912; p. 124; 500 w; 35c.

Blackie, A.—*Behavior of Fused Silica at High Temperatures.*—Faraday Soc., Trans., Nov.,1911, p. 158-164*; $4.00.

Bowen, N. L.—*The Binary System: $Na_2Al_2Si_2O_8$ (Nephelite, Carnegieite)—$CaAl_2Si_2O_8$ (Anorthite).*—Amer. Jnl. of Sci., June,1912; p. 551-574; 65c.

Casares, J., and S. Pinna.—*Geyserites and Spring Deposits of Yellowstone Park, and Comparison with Ireland Geyserite* [in Spanish; read Dec.4,1911, and Jan.8,1912].—Soc. Española de Fisica y Quimíca, 1911; pp. —.

Doelter, C.—*Ueber Gleichgewichte in Silikatschmelzen und über die Bestimmung des Schmelzpunktes des Calciummetasilikates;* [Points of equilibrium in fusing silicates and determination of the melting point of calcium metasilicate; read to K. K. Akad. d. Wiss., Wien].—Vienna, 1911; 26 pp*; 75c.

de Florin, H. Büeler.—*Verfahren zum Erschmelzen von Quarz;* [Process for smelting of quartz].—Elektrochem. Zts., Jan., 1912; p. 271; 1000 w*; 60c.

Höing, S.—*Die Betriebs- und Wirtschaftsverhältnisse der Quartzitbrüche im Westerwald;* [Quartzite mining in the Westerwald, Germany, for silica-brick].—Glückauf, Jan. 27,1912, pp. 137-140; 50c.

Jesser.—*Ueber Sinterungsvorgänge;* [Reactions in the sintering and smelting of silicates].—Berg & Hüttenm. Jahrb. Leoben-Pribram, Vol. 59, No. 4; pp. 356-369; $1.50.

Lankester, Sir Ray.—*Flint and Flint Implements.*—Stone Trades Jnl., March,1912; p. 1079; 4000 w; 35c.

Liesegang, R. E.—*Die Entwickelungsgeschichte der Achate;* [Genesis of agates].—Aus der Natur, 1911, No. 18, pp. 561-566*; 75c.

Mansfield, R. E.—*Siloxyd Glass.*—U. S. Consular Rep., May6,1912; p. 490; 500 w; 20c.

Marc, R.—*Referat über die bis zum Jahre 1911 aus dem Geophysical Laboratory, Carnegie Institution in Washington hervorgegangen Arbeiten;* [Review of work of the Geo-Physical Laboratory, Washington, up to 1911 on the melting of silicates].—Zts. f. Elektrochemie, Jan.1,1912; p. 2; 8000 w; 40c.

Marshall, A. E.—*Fused Silica Ware, Its Manufacture, Properties and Uses in the Chemical Industries;* [read to Amer. Chemi. Soc., N. Y. section; abstract].—Met. & Cheml. Engg., April,1912; p. 248; 1200 w*; 35c.

Italian abstract in Rassegna Mineraria, Apr.21, p. 232; 800 w; 35c.

Pohl, Ad.—*Stand der heutigen Quarzglas Verwendung in der Industrie;* [Present-day status of quartz glass and its applications in industry; read to Ver. Deu. Fabriken Feuerfester Produkte; brief abstract].—Ton Industrie Ztg., Apr.4,1912; p. 590; 300 w; 30c.

Saunders, L. E.—*Temperature Measurements on Silicon-Carbide Furnaces;* [Read to Amer. Electrochemi. Soc., April,1912; brief abstract].—Met. & Cheml. Engg., May,1912; p. 287; 1000 w*; 35c.

Thomas, F.—*Siloxyd, ein höherwertiger Ersatz des Quartzglases;* [Siloxide, an improved substitute for quartz glass; silica containing zirconia or titania].—Chemiker Ztg., Jan.9,1912, p. 25; 3500 w*; 35c.

———. *Beiträge zur Kenntnis der feuerfesten Materialen;* [Studies on Refractories; 1: Quartz and silicate brick and effect of lime; 2: Magnesite and kaolin mixtures; 3: manganese and titania].—Centralbl. d. Hütten & Walzwerke, Dec.15,1911; p. 673; Dec.25, p. 694; Jan.5,1912, p. 8; 3000 w; tables; 65c.

———. *Diatomite from the E. Africa Protectorate;* [Analyses of deposits along Rift valley].—Imperial Inst., Bull., Apr., 1912; p. 74; 300 w; 75c.

———. *Expansion des briques Dinas et des briques siliceuses;* [Expansion in Dinas silica brick].—Rev. d. Matériaux, May, 1912; p. 57-B; 1000 w*; 65c.

———. *Les propriétés du silico-calcium;* [The properties of silico-calcium and use in desulphurizing and dephosphorizing of steel].—Jnl. du Four Electriq., Apr.15,1912; p. 175; 350 w; 35c.

Salines and Alkalis

Beck, K. — *Petrographisch - geologische Untersuchung des Salzgebirges im Werra-Fulda-Gebiete der deutschen Kalisalzlagerstätten;* [Petrographic-geologic researches in the saline formations in the Werra-Fulda district of the German potash field].—Zts. f. prakt. Geol., April,1912; p. 133-159*; $1.25. Abstract in Kali, Junel, p. 262; 1800 w; 45c.

Berge, A.—*Die Fabrikationen von Bittersalzen und Chlormagnesium;* [The manufacture of magnesium sulphate (epsom salts) and magnesium chloride as by-products in the manufacture of potassium chloride and sulphate].—Halle, 1912; 67 pp*; $1.50 (book).

Bonney, W. L.—*Salt Springs at Salinas, San Luis Potosi.*—U. S. Consul. Rep., Aug. 16,1911, p. 721; 800 w; 10c. Reprint in E. & M. J., Nov.11, p. 957; 25c. Also in Mex. Mng. Jnl., Jan.,1912, p. 25; 25c.

Bretnütz, A.—*Untersuchung des Steinsalzes vom Benther Salzgebirge bei Hannover;* [Examination of the Permian rock-salt minerals at Benth near Hannover].—Hannover Techn. Hochschule dissert., 1911; pp. —; $1; (Thesis).

Abstract in Kali, Oct.15,1911; p. 454; 3200 w; 45c.

Flegel.—*Mineral Deposits of North Africa;* [In German].—See under N. Africa.

Förster, B.—*Die zur Aufsuchung von*

Steinsalz und von Kalisalzen im Elsass ausgeführten Tiefbohrungen; [Prospecting-Drilling the Tertiary beds of Alsace for Potash or Rock Salt].—Geol. L-A. Elsass-Lothringen, Mittlngn., 1911; 175 pp*; $2.00; (book).

Abstract in Organ d. Bohrtechniker, Jan. 1,1912, p. 4; 1800 w; 45c. Also in Kali, Feb.15, p. 77; 3000 w; 35c.

Formenti.—*Industrial Wastes* [in Italian].—See under Waste Disposition.

Friedmann, A.—*Neue chemische Analysen vom Wasser des Toten Meeres;* [New chemical analyses of the Dead Sea brines].—Chemiker Ztg., Feb.6,1912; p. 147; 500 w; 30c.

Friedrich, K.—*Untersuchungen über den Goldgehalt von Gebirgsproben und Solen deutscher Salzlagerstätten;* [The gold content of the rocks of German rock-salt deposits and brines].—Inst. f. Metallographie & Probierkunde an Freiberg, Mittlngn. f. 1910; pp. 73-75; $3.20.

Häberle, D.—*Ueber die Herkunft der Salzquellen im Rotliegenden des Alsenz-, Glan-, und Nahegebietes;* [Origin of the salt springs in the Red Beds of the Alsenz-Glan districts; from Oberrhein. Geol. Ges., Jahrb., Vol. 2, No. 1; brief abstract].—Kali, May,1,1912; p. 210; 250 w; 35c.

Hahn, F. F.—*The Form of Salt Deposits.*—Econ. Geol'y, Feb.-March,1912; pp. 120-135*; 65c.

Hamman, W. D.—*The Searles Lake Potash Deposit.*—See under Potash.

Hausbrand, E.—*Das Trocknen mit Luft und Dampf;* [Manual of Steam and Air-Drying].—Berlin, 1911; 142 pp*; $2 (book).

Kennedy, J. D.—*Government Bureaus and Potash;* [Includes notes on California deposit of potash, nitre and salines].—M. & S. P., May11,1912; p. 669; 1800 w; 20c.

Lunge and Berl.—*Testing Methods in the Chemical Industries* (in German).—See under Chemistry.

Martell, Paul.—*Das Salinenwesen in den Vereinigten Staaten;* [The salt industry in the United States].—Kali, Dec.15,1911, p. 554; 9500 w; 50c.

Martell, P.—*Das Salinenwesen in Japan und China;* [Salt industry of Japan and China.—Techn. Blätter, May18,1912; p. 157; 500 w; 35c.

Odriozola, A.—*Santander District, Spain.*—See under Zinc.

Pawloski, Aug.—*L'industrie du sel en Meurthe-et-Moselle;* [The salt industry of Meurthe-et-Moselle, France].—Phosphate, March25,1912; p. 262; 600 w; 35c.

Phalen, W. C.—*Occurrence of Potash Salts in the Bitterns of the Eastern United States.*—U. S. Geol. Survey Bull. 530-B; 19 pp.; 10c.

Abstract in Amer. Fertilizer, Dec.30,1911, pp. 21-3; 20c.

Piestrak, F.—*Die Salinen in Galizien und in der Bukowina;* [The salines of Galicia and Bukowina].—Oestr. Zts. f. Berg- & H-wesen, Feb.17,1912; p. 85; Feb.24, p. 103; 8000 w; 75c.

Reidemeister, C.—*Ueber Salztone und Plattendolomite im Bereiche der norddeutschen Kalisalzlagerstätten;* [Saline clays and dolomitic flagstones in the north German potash formations].—Kali, May15, 1912; p. 226; June15, p. 295; 7000 w*; 65c.

Valentiner, S.—*Helium Gehalt im blauen Steinsalz;* [Helium content of blue rock salt from Stassfurt].—Kali, Jan.1,1912; p. 1; 1600 w*; 45c.

Viola, B.—*Calculations of Vacuum Pans.*—Met. & Chemi. Engg., Jan.,1912, p. 31; 4000 w; 35c.

Viola, B.—*Vacuum Pans with Jackets.*—Met. & Chemi. Engg., Feb.,1912, p. 102; 1000 w*; 35c.

Wooton, Paul.—*Louisiana Salt Mines; Their Operation and Output.*—Mining & Engg. World, Feb.17,1912; p. 401; 1000 w*; 10c. Reprinted in Mines & Methods, March, p. 441*; 20c.

Wunstorf, W., and G. Fliegel.—*Die Zechsteinsalze des niederrheinischen Tieflandes;* [The Permian (Zechstein) salt and potash beds of the lower Rhine region].—Glückauf, Jan.20,1912, pp. 89-96*; 50c.

Zerge, A.—*Die Fabrikationen von Bittersalz und Chlormagnesium;* [The manufacture of magnesium sulphate (epsom salts) and magnesium chloride].—Halle, 1912; pp. —; $1.50 (book).

A. S.—*Salzerzeugung Deutschlands,* 1906-1910; [Statistics of production, consumption and exports of German salines, 1906-1910].—Oestr. Zts. f. Berg- & H-wesen, Feb.3, pp. 61-66; Feb.10, pp. 76-79; tables; 75c.

Ges. für Chemische Industrie, Basel.—*Apparat zur Elektrolyse geschmolzener Alkali-chloride;* [Apparatus for electrolysis of alkaline chlorides; Engl. Pat. No. 18,300; 1910].—Kali, Jan.15,1912; p. 43; 750 w*; 45c.

———. *Die Production der deutschen Salinen;* [Production and conditions in the salt industry of Germany, 1908 and 1909].—Montan Ztg., Jan.15,1912, p. 22; 1000 w; 30c.

———. *Gesamtergebnisse in der Montanindustrie,* 1909-1910; *Salzbergbaubetriebe;* [Statistics of mining production in Germany in 1909 and 1910; salt works, salines, and including crude potash salts].—Kali, Erz & Kohle, May5,1912; p. 449; 1000 w; tables; 35c.

———. La nouvelle fabrique de sel de Cheshire; [The new salt works at Cheshire, England.—Génie Civil, Dec.23,1911, pp. —; 50c.

———. *South Australia, July-Dec.,* 1911.—Mng. Jnl., May4,1912; p. 426; 35c.

———. *Von der Salzindustrie des Basskuntschak;* [The salt industry of Basskuntschak salt lake, Astrachan, in 1911].—Riga Industrie Ztg., Apr.30,1912; p. 127; 600 w; 35c. Also in Bergbau, June6, p. 323; 600 w; 35c.

KAYSER PROCESS

See Potash.

ALUMS; SODA; ALKALIS

Beyer, —. *Alaun und Gips als Mineralneubildungen und als Ursachen der chemischen Verwitterung in den Quadersandsteinen des sächsischen Kreidegebietes;* [Alums and gypsum as secondary minerals and as causes of the weathering and alteration of the Quader sandstone formation in the Cretaceous of Saxony].—Deu. Geol. Ges., Zts., Vol. 63, No. 4, 1912; pp. 429-467*; $1.

Cazes, E.—*L'état actuel de l'industrie des aluns et du sulfate d'alumine;* [Present status of the alum and aluminum sulfate industries; from Rev. de Chimie Appliquée].—Jnl. du Four Electriq., Feb.1,1912, p. 56; 3000 w; 35c.

von Girsewald, C.—*Peroxyde und Persalze;* [Progress in peroxides, percarbonates and perborates, 1909-1911].—Chem. Industrie, Jan.15,1912; p. 35; Feb.1, p. 69; 7000 w; 75c.

von Kéler, H.—*Die wichtigsten Fort-*

schritte auf dem Gebiete der anorganischen Grossindustrie im Jahre 1911; [Most important advances in the chemical industries in 1911. (See Acids.)

Kershaw, J. B. C.—*Recent Progress in the Manufacture and Application of Hypochlorite Solutions for Bleaching and Disinfecting Purposes*.—Soc. of Chem'l Ind'y, Jnl.; Jan.31,1912; p. 54; 3200 w; 65c.

Martell, P.—*Zur Geschichte der chemischen Industrie in der Mark Brandenburg;* [History of the chemical industry in Mark Brandenburg; chiefly on alum and saltpeter in 18th and 19th centuries].—Chem. Industrie, Jan.1,1912; p. 2; 5000 w; 50c.

Méker, P.—*Soude, Potasse, Sels;* [Technology of the soda, potash and saline industries].—Paris, 1911; 246 pp; $1.50 (book).

Mühlhaus, H.—*Untersuchungen über das Billiter Verfahren zur Gewinnung von Alkali und Chlor;* [Tests of the Billiter process for manufacture of alkali and chlorine].—Dresden Techn. Hochschule Dissert., 1911; 59 pp; $1 (thesis).

Reusch, K.—*Jahresbericht über die Industrie der Mineralsäuren und des Chlorkalkes;* [Technical review of the mineral-acid and chloride of lime industries in 1911].—Chemiker Ztg., Feb.20,1912, p. 195; Feb.24, p. 213; Feb.27, p. 218; 550 w; 65c

Tedesca, H.—*Studien über den Ammoniaksodaprozess;* [The ammonia-soda process].—Dresden Techn. Hochschule dissert., 1911; pp. — ;(thesis).

Wegscheider, R.—*Die Natriumcarbonate in der Natur;* [Sodium carbonate occurrences in nature; read to Ver. Oesterr. Chemiker, Dec.2,1911; brief abstract.—Chemiker Ztg., Jan.25,1912, p. 97; 500 w; 35c.

———. *Commercial Availability of Alunite;* [Methods of treatment for potash, alum, and bauxite].—E. & M. J., March16, 1912, p. 564; 1000 w; 25c.

———. *Les gisements de soude de l'Afrique du Nord;* [The soda deposits and workings of Algeria].—Echo d. Mines, Jan. 22,1912, p. 93; 200 w; 35c.

BORAX; BORATES

Bürgin, E.—*Beiträge zur Kenntnis der Entstehung von Perboraten durch Elektrolyse;* [The production of perborates by electrolysis].—Berlin Techn. Hochschule Dissert., 1911; 58 pp*; $1 (thesis).

Holt, A.—*The Boric Acids.*—Manchester Lit. & Philos. Soc., Memoir No. 10, 1911; pp. 9; $2.

Yale, Chas. G.—*Production of Borax in the United States in* 1910; [from U. S. Geol. Survey, Mineral Resources division report].—Mining & Engg. World, Dec.16,1911, p. 1216; 500 w; table; 10c.

IODINE; BROMINE; CHLORINE

Blackmore, H. S.—*The Facts About Gold, Silver and Iodine in Sea Water.*—Cassier's Mag., Jan.,1912; p. 3; 3500 w; 35c.

Bruner, L, and E. Bekier.—*Ueber die Elektrolyse von geschmolzenem Chlorjod und Bromjod;* [Electrolysis of molten or soluble chlorine-iodine and bromine-iodine].—Zts. f. Elektrochemie, May15,1912; p. 368; 3000 w*; 45c.

Milbauer, J.—*Ueber die Verarbeitung der bei der Fabrikation von Konversionssalpeter sich ergebenden Mutterlaugen;* [Extraction of iodine from potash-nitrate liquors and waste liquors in Austria].—Chemiker Ztg., March26,1912; p. 331; 2500 w; 35c.

Turrentine, J. W.—*Note on the Determination of Iodides by Direct Titration;*—Jnl. of Ind'l & Engg. Chem'y, June,1912; p. 435; 1500 w*; 65c.

POTASH

See Potash.

NITRATES

See "Nitrates and Nitrogen."

GYPSUM

See Gypsum.

HYDROCHLORIC ACID

See Acids.

Sulphur

See "Pyrite and Sulphur."

Talc and Soapstone

Diller, J. S.—*The Production of Talc and Soapstone in* 1911; [N. Y., Vt., Va., Penn., Mass., N. Car., N. J., Cal., Ga., Md., R. I.].—U. S. Geol. Survey, Mineral Resources f. 1911; 9 pp.; 20c. Abstract in Mining & Engg. World, June15, p. 1252; 750 w; 10c.

Eckel, E. C.—*Building Stones and Clays, Their Origin, Characters and Examination;* [Includes chapter on soapstone and allied materials, bibliography].—N. Y., 1912; pp. xiv., 264; 37 figs.; $3; (book).

Rosenberg, H.—*Einige Daten über den berühmten Talkum Bergbau der Federweiss-Interessentenschaft in Mautern;* [Historical notes on the talcum mines of the Federweiss firm at Mautern, Styria].—Montan. Ztg., Feb.15,1912; p. 62; 1600 w; 35c.

Watson, T.—*Talc and Soapstone Resources of Virginia;* [From Bull. 6, Va. Geol. Surv.].—Mining & Engg. World, Apr. 20,1912; p. 860; 1500 w; 10c.

Zircon Earths

See "Thorium and Rare Earths" under Metallics.

III. TECHNOLOGY

TECHNOLOGY OF MINING, MILLING OR ORE DRESSING AND METALLURGIC PRACTICE AND MACHINERY; ASSAYING AND MINEROCHEMISTRY, ECONOMIC GEOLOGY, MINING LAW AND LEGISLATION, ETC.

CHAPTER VIII.—MINE AND MINING (1)

Prospects and Prospecting

See also "Legislation" for additional references to mineral land laws, etc.

Bateman, G. C.—*Determining the Angle of Diamond Drill Holes;* [Read to Canadian Mng. Inst., Porcupine branch].—Canadian Mng. Jnl., March1,1912, p. 167; 1000 w*; 25c.

Brown, J. C.—*Some Factors Governing the Accurate Valuation and Successful Exploitation of Gold-Bearing Alluvials in India.*—Mng. & Geol. Inst. of India; Trans; Jan.,1912; pp. 209-212; $2.50.

Abstract in London Mng. Jnl., May4, p. 452; 500 w; 35c. Also in Mining & Engg. World, May25, p. 1100; 1000 w: 10c.

Cramer, H.—*Die Nachweisung von Steinkohlen-Vorkommen in Bohrlöchern;* [The identification and discovery of coal in borings].—Kohle & Erz, Apr.22,1912; p. 386; 2000 w; 35c.

Davis, Jas.—*Packing Supplies in a Mining Region;* [Saddling and pack-loading].—Mng. & Sc. Press, March23,1912; p. 431: 2800 w*; 20c.

Dennis, F. J.—*Examination of Dredging Properties.*—Amer. Inst. Mng. Engrs., Bull. 64, Apr.,1912; pp. 407-410: $1.15.

Abstract in Mng. Sci., May9, p. 411; 1600 w; 20c. Also in Mex. Mng. Jnl., June, p. 41; 1600 w; 25c.

Also in S. Afr. Engg., June, p. 106; 1000 w*; 35c. Also in Mining & Engg. World. Aug. 3, p. 198; 1600 w; 10c.

Emmons, Wm. H.—*Outcrop of Ore Bodies.*—"Types of Ore Deposits," by H. F. Bain and others; 1911; pp. 299-353*.

Reprinted from Mng. & Sc. Press, Dec.4 and Dec.11, 1909.

Fegan, H. J.—*Memorandum in re Saline Claims, Potash Deposits, etc.;* [Manner of legal location in U. S.].—U. S., 62d. Congr., 2d. Session; Senate Doc. No. 190; 1912; pp. 126-128.

Förster, B.—*Die zur Aufsuchung von Steinsalz und von Kalisalzen in Elsass ausgeführten Tiefbohrungen;* [Prospecting-Drilling the Tertiary beds of Alsace for Potash or Rock Salt].—Geol. L-A. Elsass-Lothringen, Mittlngn., 1911; 175 pp*; $2.00; (book).

Abstract in Organ d. Bohrtechniker, Jan. 1.1912, p. 4; 1800 w; 45c. Also in Kali, Feb.15, p. 77; 3000 w; 35c.

Hall, A. E.—*Speeds and Cost of Diamond Drilling at Porcupine, Canada.*—Columbia School of Mines, Quar'ly, April,1912; pp. 229-232; 1500 w; 65c.

Abstract in Engg. & Contractg., Apr.24, p. 462; 1000 w; 20c. Also in Mng. Sci., May30, p. 475; 1000 w; 20c.

Henrich, C.—*A Problem in Deep-Mine Exploration by Crosscut.*—Mining & Engg. World, June1,1912; p. 1141; 2500 w*; 10c.

Heys, W.—*Boring for Coal by Methods Giving Solid Cores of the Strata Passed Through.*—Sci. & Art of Mng., June8,1912; p. 525; 1200 w*; 35c.

Hoskin, A. J.—*Considerations Before Opening Mine;* [Legal matters, topography, transportation, labor, supplies, extent of property, etc.].—Mines & Minerals, June, 1912; p. 682; 3000 w; 35c.

Johnson, J. E., and B. F. Tibby.—*Field Classification of Igneous Rocks.*—Salt Lake Mng. Rev., March30,1912; p. 17; 1500 w; chart; 25c.

Koch, Walter A.—*Subsidizing Prospecting.*—M. & S. P., Dec.23,1911, p. 808; 1000 w; 20c.

Lakes, H.—*Prospecting Conditions Found in Portions of Sonora;* [West coast gold and silver belts].—Mining & Engg. World, Jan. 13,1912, p. 110; 1500 w; 10c.

Martin, Al. H.—*Exploring Dredging Ground.*—Mines & Methods, Dec.,1911, p. 351; 1600 w; 25c.

Martin, J. J.—*Prospecting Gold Placers in Korea.*—M. & S. P., May18,1912; p. 690; 2000 w*; 20c.

McCombie, J. — *Prospecting;* [General notes].—Mng. Mag., Feb.,1912; p. 136; 500 w*; 45c. W. Australian Mng., etc., Jnl., March16, p. 7; 500 w*; 35c.

Morineau, —. *Nouvelle Méthode de sondage des alluvions par le vide;* [Morineau vacuum process for drilling and sampling prospect holes in placer deposits].—Rev. Noire, Jan.7,1912, p. 10; 1400 w; 35c.

Perret, L.—*Gold and Platinum Alluvial Deposits in Russia;* [Methods of prospecting and working].—Instn. of Mng. & Met'l'gy, Bull. 92, May,1912; 34 pp*; 50c.

Abstract on "Prospecting Frozen Alluvial Deposits" in Mining & Engg. World, June 15, p. 1247; 4000 w*: 10c. Also in Mng. Sci., June20, p. 929; 2000 w; 20c.

Richardson, D. A.—*Origin and History of Mining Locations in Mexico.*—Mining & Engg. World, Feb.10,1912; p. 357; 2000 w; 10c.

Ropes, L. S.—*As to Prospecting;* [Reviews maladministration of Land Office. prospectors' rights on Forest Reserves, and filing on buried lodes].—E. & M. J., June1, 1912; p. 1069; 1800 w; 25c.

Siegel, F. J.—*Examination of Dredging Ground;* [Discusses Dennis' paper].—Mng. Sci., June13,1912; p. 514; 700 w; 20c.

Stewart, C. A.—*Geology in the Examination of Prospects.*—M. & S. P., May4,1912; p. 622; 2500 w; 20c.

Van Wagenen. F. T.—*The Prospector and the Mining Law;* [Discusses the necessity of encouraging the prospector, and extra-lateral rights].—M. & S. P., May18, 1912; p. 688; 3000 w; 20c.

Verrill, A. H.—*Knots, Splices and Rope-*

work—New York, 1912; 102 pp*; $1; (book).

White, E. E.—*Surveying and Sampling Diamond Drill Holes;* [Surveying deflected prospect borings in Lake Superior iron region].—Lake Superior Mng. Inst., Proc., 1911; pp. 100-120*.
Abstract in E. & M. J., Sept.23,1911, p. 587; 3500 w*; 25c. Also in Mines & Minerals, Oct., p. 167; 4500 w*; 35c. Also in Mex. Mng. Jnl., Oct., p. 23; 4500 w*; 25c. Also in Engg. & Contractg., Oct.4, p. 345; 4500 w*; 20c. Also in Mining & Engg. World, Nov.25, p. 1061; 3500 w*: 10c

Williams, P.—*About Exploration Companies.*—Mng. Mag., March,1912; p. 218; 1200 w; 45c.

———. *East Tintic Claim Decision;* General Land Office ruling requiring strict discovery of mineral of present or prospective value on mining claims].—E. & M. J., June15,1912; p. 1167; p. 1163; 3000 w; 25c.

———. *How Some Districts Are Discovered by Accidents.*—Mining & Engg. World, March16,1912; p. 591; 600 w; 10c.

DIVINING RODS AND WIRELESS TELEGRAPHY

von Klinckowstroem, K.—*Grundwasser und Wünschelrute;* [Ground water and the divining rod].—Organ d. Bohrtechniker, Apr.15,1912; p. 91; 3000 w*; 45c.

Trüstedt, O.—*Ueber Erzsuchen mittels Elektrizität;* [Prospecting for ores with reflected electric rays].—Zts. f. prakt. Geol., April.1912; p. 159; 3300 w*: $1.25.
English translation "Locating Ore Deposits by Wireless Telegraphy;" Mining & Engg. World, June8,1912, p. 1191; 3000 w*; 10c.

J. B. P.—*Experiments with the so-called Diving Rod.*—Mining & Engg. World, Apr. 13,1912; p. 825; 500 w; 10c.

R. F. W.—*A Prospector on the Utility of the Divining Rod.*—Mining & Engg. World, Feb.24,1912; p. 469; 1000 w; 10c.

———. *Scientific Diving Rods;* [Magnetic needles; arrest of electric waves; and Königsberger thermometric indicator].—Mining & Engg. World, May4,1912; p. 945; 800 w; 10c.

———. *Wireless Telegraphy to Locate Underground Water and Ore;* [Discusses Trustedt's paper].—Mining & Engg. World, June8,1912; p. 1183; 1000 w; 10c.

TEXT BOOKS; GENERAL TREATISES

Christensen, A. O.—*Makeshift Assaying for Prospectors.*—E. & M. J., Dec.23,1911, p. 1233; 2200 w*; 25c.

Cox, S. Herbert.—*Prospecting for Minerals.*—London, 1912 (6th edition; pp. —; $1.75 (book).

Hamman, K. L.—*The Prospectors' Alliance of America.*—Mng. Sci., March7,1912, p. 226; 2000 w; 20c. Also in Los Angeles Mng. Rev., March16, p. 6; 1600 w; 20c. Also in Mining & Engg. World, March23, p. 648; 1600 w; 10c.

Krusch, P.—*Die Untersuchung und Bewertung von Erzlagerstätten;* [Examination and Critical Evaluation of Ore Deposits].—Stuttgart, 1911 (2d edition); pp. xxiv, 569; 125 figs.; $5.50; (book).

Levat, D.—*Guide pratique du prospecteur à Madagascar;* [Practical guide for the prospector in Madagascar].—Paris, 1912; 132 pp.; 38 figs; map; $2.50 (book).

O'Donahue, T. A.—*The Valuation of Mineral Properties;* [Read to S. Staff. & Warwicks, Inst. of Mng. Engrs; abstract].—Coll'y Guardn., Feb.23,1912; p. 380; March1, p. 423; 5400 w; 50c. Also in Iron & Coal Trades Rev., Feb.23, p. 291; March 1, p. 328; 5500 w; 30c.

Surveying and Drafting

Aston, F. J.—*Advantages of Theodolite over Miners' Dial for Underground Surveys.*—Sci. & Art of Mng., March30,1912; p. 407; 600 w; 35c.

Arthur, E. P.—*Note Keeping in the Making of Mine Surveys.*—Mng. Sci., Jan.11, 1912, p. 24; 1400 w; 20c.

Bainbridge, G. H., jr.—*The Vernier.*—Engg. News, Jan.25,1912; p. 160; 1000 w*; 25c.

Baird, S. P.—*A Four-Sided Leveling Rod.*—Engg. News, Feb.22,1912; p. 343; 500 w; 25c.

Bateman, G. C.—*Determining the Angle of Diamond Drill Holes;* [Read to Canadian Mng. Inst., Porcupine branch].—Canadian Mng. Jnl., March1,1912, p. 167; 1000 w*; 25c.

Brandenberg.—*Der Pendel- oder Hänge theodolit;* [The pendulum or suspended theodolite].—Mittlngn. aus Markscheidw., 1912, No. 2; pp. 66-80*; $1.50.

Breithaupt.—*Ablesevorrichtung für Nonien und Magnetnadeln;* [Simplifying device for reading verniers and magnetic needle simultaneously]. — Mittlngn. aus Markscheidw., No. 2, 1912; pp. 83-85*; 75c.

Bristol, J. J.—*Stope Measurements;* [Surveying and plotting methods].—Chemi. Met. & Mng. Soc., S. Afr., Jnl., Dec.,1911; p. 236; 2800 w*; 90c.

Collins, C. P.—*The Engineer on Development Work;* [Surveying and drafting methods for collieries].—Coal Age, March9, 1912; p. 708; 2500 w*; 20c.

Fischer, F. L.—*Surveyor's Backsight Sconce.*—E. & M. J., June8,1912; p. 1125; 500 w*; 25c.

Fiegler.—*Ein neues Hilfshängezeug;* [A new auxiliary compass].—Mittlngn. aus. Markscheidw., 1912, No. 2; pp. 80-83*; $1.50.

Fraser, L.—*Surveying New Cross-Sections for Embankments.*—E. & M. J., June1, 1912; p. 1076; 800 w*; 25c.

Harper, J. B.—*Surveying a Mine Without Instruments;* [From Mng. Sci.].—Mines & Methods, Dec.,1911, p. 355; 1000 w*: 25c.

Henderson, H. G.—*Some Practical Points Regarding Mine Surveying.*—Iron & Coal Trades Rev., March29,1912; p. 495; 1000 w*; 35c.

Hodge, W. R.—*Target for Mine Surveying.*—E. & M. J., Apr.20,1912; p. 783; 150 w*; 25c.

Hoffman, J. I.—*Recent Practice in Diamond Drilling and Borehole Surveying;* [on the Rand].—Instn. of Mng. & Met'l'gy, Bull. 91; April,1912; pp. 11*; 50c.
(Discussion), Bull. 92, May, pp. 23-33; 50c.
Abstract in Coll'y Guardn., Apr.26,1912; p. 829; 4000 w*; 35c. Also in S. Afr. Engg. Apr., p. 61; 1800 w*; 35c. Also in S. Afr. Mng. Jnl., May4, p. 355; 3000 w; 35c. Also in Mining & Engg. World, May11, p. 1002; 4500 w*; 10c. Also in E. & M. J., May18, p. 980; 500 w*; 25c.
p. 980; 500 w*; 25c. Also in Mex. Mng. Jnl., Aug., p. 26, 4000 w*; 25c.

Jessup, D. W.—*Vertical Stadia Wires.*—E. & M. J., March30,1912; p. 637; 500 w; 25c.

Marshall, R. B.—*Results of Triangulation and Primary Traverse for the Years 1909 and 1910.*—U. S. Geol. Survey, Bull. 496; 392 pp.*; 10c.

Marshall, R. B.—*Retracement of the Boundary Line Between Idaho and Washington.*—U. S. Geol. Survey, Bull. 466; 1911; 39 pp*; 10c.

McCormick, R. L.—*A New Stadia Attachment and Diagram.*—Engg. News, Apr.25, 1912; p. 789; 1500 w*; 25c.

McCullough, E.—*Adjustable Wires for* Stadia Surveying.—Engg. Record, May11, 1912; p. 515; 2000 w; 25c.

McCullough, E.—*Fixed and Adjustable Stadia Wires.*—Engg. Record, June15,1912; p. 672; 500 w; 25c.

Newlands, J. E.—*Topographical Surveys on the C. P. Ry. Irrigation Project in Alberta;* [Read to Instn. of Civ. Engrs.; abstract].—Engg. Record, Jan.13,1912; p. 41; 3300 w*; 20c.

Noble, F. C.—*Notes on the Survey of a Subaqueous Tunnel;* [N. Y. to Brooklyn; from Amer. Soc. of Civ. Engrs., Proc. f. Dec. 1911, p. 1301; abstract].—Engg. Record, Jan.6,1912; p. 14; 3500 w*; 20c. Also in Engg. & Contractg., Jan.17, p. 65; 3000 w*; 25c. Also in Engg. News, Apr.11, p. 682; 4000 w*; 25c. Also in Coal Age, June1, p. 1109; 3100 w*; 20c.

Palmer, L. A.—*Notes Upon Direct Solar Observation.*—Mng. Sci., Feb.22,1912; p. 191; 2000 w; 20c.

Pickels, G. W., jr.—*The relative Advantages of Land Survey Methods, With Reference to Speed, Accuracy and Applicability;* [Read to Ill. Soc. of Engrs. & Surveyors].—Engg. & Contractg., Jan.31,1912; p. 139; 2000 w; 25c.

Ransome, F. L.—*The Plane Table in Geologic Mapping.*—Econ. Geol'y, Feb.-March,1912; p. 113-120; 65c.

Rice, E. R.—Mine Survey Notes; [Discussion of Riter's paper].—Amer. Inst. Mng. Engrs., Bull. 64, Apr.,1912; pp. 447-453; $1.15.

Robinson, A. W.—*Cost of Taking Topography by Transit and Stadia.*—Engg. & Contractg., May15,1912; p. 543; 500 w; 20c.

Rowland, R. H.—*Estimating Irregular Areas.*—E. & M. J., March23,1912; p. 587; 1000 w*; 25c.

Russell, H. Y.—*Surveying a Raise Connection with Transit.*—E. & M. J., June8, 1912; p. 1125; 1000 w; 25c.

Sager, J. A.—*Replacing Survey Monuments.*—E. & M. J., March16,1912, p. 537; 500 w*; 25c.

Schofield, W. Mc. N.—*Allowable Error in Closing Survey.*—Mines & Minerals, March,1912, p. 472; 300 w; 35c.

White, E. E.—*Surveying and Sampling Diamond Drill Holes;* [Surveying deflected prospect borings in Lake Superior iron region].—Lake Superior Mng. Inst., Proc. 1911; pp. 100-120*.

Abstract in E. & M. J., Sept.23,1911, p. 587; 3500 w*; 25c. Also in Mines & Minerals, Oct., p. 167; 4500 w*; 35c. Also in Mex. Mng. Jnl., Oct., p. 23; 4500 w*; 25c. Also in Engg. & Contractg., Oct. 4, p. 345; 4500 w*; 20c. Also in Mining & Engg. World, Nov.23, p. 1061; 3500 w*; 10c.

Wilski, P.—*Bergmännische Fragen; III: Die Ausbildung der Markscheider im Königreich Sachsen;* [The training of the mine surveyor in Saxony].—Techn. Blätter, May 4,1912; p. 140; May11, p. 147; 4000 w; 50c.

"Colliery Surveyor."—*Connecting Surface and Underground Surveys.*—Sci. & Art of Mng., March30,1912; p. 391; 1000 w; 35c.

"Colliery Surveyor."—*Measurement of Depth of Vertical and Inclined Shafts.*—Sci. & Art of Mng., May25,1912; p. 491; 750 w*; 35c.

———. *Back-Sighting in a Winze Survey.*—E. & M. J., Apr.6,1912; p. 687; 500 w*; 25c.

———. *Novedades topograficas;* [New surveying equipment; improved Breithaupt & Sohn theodolite sights and accessories for electrically illuminated mines].—Rev. Minera, May16,1012; p. 237; 1000 w; 35c.

TEXT BOOKS; GENERAL WORKS

Briggs, H.—*The Effects of Errors in Surveying.*—London, 1912; 180 pp.*; $1.75 (book).

Dolezal, E.—*Studien zur Markscheidekunde;* [Notes on mine surveying].—Berg- & Hüttenm., Jahrb. Leoben-Przibram, Vol. 59, No. 2, 1911; pp. 99-134*; $3.

Dwerryhouse, A. R.—*Geological and Topographical Maps; Their Interpretation and Use.*—London, 1911; pp. —; $1.75 (book).

Ingram, E. L.—*Geodetic Surveying, and the Adjustment of Observations (Method of Least Squares).*—New York, 1912; pp. 390*; $4 (book).

Leaning, J.—*Quantity Surveying for the Use of Surveyors, Architects, Engineers and Builders.*—London, 1911 (5th edition); 936 pp*; $10 (book).

Pelletan, A.—*Traité de Topographie;* [Manual of Topographic Surveying].—Paris, 1911 (2d edition); pp. —; $4.00 (book). Reviewed in Engnrg., Feb.9,1912; p. 172; 750 w.

DRAFTING

Bell, C. F.—*Drafting Room Practice of the Board of Water Supply, N. Y. City;* [Read to Municipal Engrs. of N. Y.; abstract].—Engg. Record, Apr.6,1912; p. 377; 4000 w*; 25c.

Burley, Geo. W.—*A Compass for Drawing Circular Arcs of Large Radii.*—Mechl. World, March15,1912; p. 127; 1000 w*; 35c.

Clark, H. H.—*Symbols to Designate Electric Installations on Mine Maps;* [read to Coal Mng. Inst. of Amer., Dec., 1911].—Coal & Coke Op., Dec.28,1911, p. 417; 2100 w*; 25c. Also in Mining & Engg. World, Dec. 30,1911, p. 1329; 2100 w*; 10c. Also in Coal Age, Dec.30,1911, p. 366; 2100 w*; 20c. Also in Engg. News, Feb.15, p. 300; 1200 w*; 25c. Also in Mines & Minerals, March, p. 473; 1500 w*; 35c. Coal Mng. Inst. of Amer., Proc. for 1911; pp. 308-320*.

Colles, G. W.—*Steel T-Squares and Steel Edges for Drawing Boards.*—Mechl. World, March8,1912; p. 112; 1200 w; 35c.

Dennington, A. R.—*Construction and Application of Curves;* [Methods of making diagrams for various mining purposes].—Mines & Minerals, Apr.,1912; p. 521; 1200 w*; 35c.

Finch, J. K.—*Freehand Letters for Maps and Drawings.*—Engg. Record, Apr.13,1912; p. 417; 750 w*; 20c.

Gilchrist, C. A.—*Explanation of the Planimeter.*—Engg. News, Feb.22,1912; p. 342; 700 w*; 25c.

Higbee, F. G.—*The Training of Draughtsmen;* [Read to Amer. Soc. of Engr. Draughtsmen; abstract].—Mechl. World, May31,1912; p. 257; 1200 w; 35c.

Hodge, W. R.—*A Vertical Blueprint*

Washer.—E. & M. J., Dec.23,1911, p. 1218; 250 w*; 25c.

Hodge, W. R.—*Lighting Trough for Drafting Tables;* [Illumination for drafting room].—E. & M. J., Jan.27,1912, p. 205; 200 w*; 25c.

Menzin, A. L.—*Drafting Room Practice.*—Jnl. of El'y Power & Gas, Apr.13,1912; p. 334; 2500 w*; 35c.

Oke, A. L.—*A Portable Desk.*—E. & M. J., Jan.20,1912, p. 160; 300 w*; 25c.

Scherer, G. C.—*A Composite Map-Filing Case.*—Engg. News, May23,1912; p. 985; 400 w*; 25c.

Shaw, L.—*Continuous Blue-Printing Machine.*—Engnrg., Feb.9,1912; p. 195; 500 w*; 35c.

Tittmann, O. H.—*Present Activities of the Coast and Geodetic Survey.*—Engrs. Club of Phila., Proc., Jan.,1912; pp. 23-42*; 65c.

Trautwine, J. C.—*Filing Drawings and Maps.*—Engg. News, May23,1912; p. 984; 750 w*; 25c.

Wheelock, R. P.—*An Adjustable Drafting Board.*—E. & M. J., June8,1912; p. 1130; 1000 w*; 25c.

"Colliery Surveyor."—*The Drawing Office and Its Equipment.*—Sci. & Art of Mng., Dec.23,1911, p. 225; 750 w; 35c.

———. *Efficiency in the Drafting Room;* [From "Amer. Machinist"].—Mechl. World, March15,1912; p. 125; 2000 w; 35c.

———. *Sketching Board for Use Underground;* [from the American Machinist].—E. & M. J., Apr.27,1912; p. 834; 250 w*; 25c.

———. *Some Drafting Accessories;* [From "American Machinist"].—Coal Age, Apr.20, 1912; p. 905; 500 w*; 20c.

———. *The Treatment of Mine Maps;* [For photography].—Iron & Coal Trades Rev., Jan.26,1912, p. 127; 500 w*; 30c.

MINE MODELS

Severy, C. L.—*Making Mine Models;* [Modification of glass-sheets system].—M. & S. P., March9,1912, p. 381; 500 w*; 20c.

Zulch, W. G.—*Stope Model; Wide model of veins and workings in Cripple District, Colo.*—Mines & Minerals, March,1912, p. 491; 300 w*; 35c.

Excavators; Dredging; Sluicing

DREDGES AND DREDGING

See also under California.

Bell, R. N.—*13th Annual Report of the Mining Industry of Idaho for* 1911.—Boise, 1911; 135 pp*; $1.

Clark, D.—*Australian Mining and Metallurgy.*—Melbourne, 1911; 600 pp*; $6.50 (book).

Comber, Wm. G.—*Panama Canal Dredge "Corozal."*—Engg. News, Jan.25,1912; p. 144; 2400 w*; 25c.

Cranston, R. E.—*The Design and Mechanical Features of the California Gold Dredge.*—Amer. Soc. Mechl. Engrs., Jnl., Feb.,1912; pp. 169-225*; 95c.

Abstracts in E. & M. J., Feb.17, p. 359; Feb.24, p. 417; March2, p. 455; March9, p. 507; 18,000 w*; 75c. Also in M. & S. P., Feb.24, p. 303; March2, p. 338; March9, p. 372; 14,000 w*; 40c.

Cunningham, B.—*Harbor Dredging;* [Modern machinery for channel improvements].—Cassier's Mag., March,1912; pp. 235-244*; 35c.

Eddy, L. H.—*Northern California Gold Dredging.*—E. & M. J., March23,1912; p. 607; 4500 w*; 25c.

Eddy, L. H.—*Dredging for Placer Tin in Alaska;* [Buck Creek].—E. & M. J., Dec.23, 1911, p. 1226; 1000 w*; 25c.

Eddy, L. H.—*A New Gold Dredge at Oroville, Cal.*]; [Oro Vista No. 1].—E. & M. J., Feb.10,1912; p. 306; 1200 w*; 25c.

Eddy, L. H.—*Righting Overturned Dredges;* [in California goldfields].—E. & M. J., Feb.10,1912; p. 316; 1200 w*; 25c.

Eddy, L. H.—*Dredges on Upper American River, California.*—E. & M. J., May18, 1912; p. 997; 3600 w*; 25c.

Eddy, L. H.—*Reconstructed Gold Dredges in California.*—E. & M. J., May25,1912; p. 1048; 1000 w; 25c.

Edwards, A. D.—*Method and Cost of Dredging Silt Bars, Mussel Shoals Canal, with a Ladder Dredge.*—Engg. & Contractg., March20,1912; p. 312; 4000 w*; 20c. Also in Prof. Memoirs U. S. Engrs., Jan.-Feb., 1912; pp. 51-54*; 65c.

Ettrup, L. and H. Homberger.—*Goldgewinnung durch Bagger in Kalifornien;* [Review of gold-dredging industry of California].—Ver. Deu. Ingr., Zts., Oct.14,1911, p. 1717; 5000 w*; 50c.

Ferraz, L. C.—*Gold Dredging in the River Coxipómirim, Matto Grosso, Brazil.*—Mng. Jnl., Apr.6,1912; p. 305; 2000 w; 35c.

Gibson, T. M.—*Tin Dredging in Alaska.*—M. & S. P., Jan.6,1912, p. 14; 500 w*; 35c.

Gibson, T. M.—*Gold-Dredging Industry on Seward Peninsula;* [Review for 1911].—M. & S. P., Jan.6,1911, p. 45; 4500 w*; 35c.

Gold, K.—*Ueber Bagger mit elektrischem Betriebe;* [Some European dredges, scrapers, and shovels operated electrically].—Montanist. Rundschau, Jan.16,1912; p. 57-62; 3000 w*; 45c.

Hanlon, R. Y.—*Philippine Placer;* [Reviews dredging and gravel resources].—Mineral Resources of Philipp. I'ds., 1911; p. 69; 2000 w; 65c.

Janin, Chas.—*Present-Day Problems in California Gold-Dredging.*—Amer. Inst. Mng. Engrs., Bull. 63, March,1912; pp. 241-260*; $1.15. Abstract in Engg. & Contracting, April10, p. 408; 2000 w; 20c.

Janin, Chas.—*Gold Dredging in Russia;* [Eastern Siberia; Kolchan district].—M. & S. P., Jan.6,1912, p. 66; 1600 w*; 35c.

Janin, Chas. J.—*Gold Dredging in the Philippines and in California.*—M. & S. P., Jan.6,1912, pp. 70, 72; 500 w*; 4000 w*; 35c.

Janin, Chas.—*Recovery of Gold in Dredging;* [Discusses percentages of recovery].—E. & M. J., Jan.27,1912, p. 214; 1500 w; 25c.

Janin, Chas.—*Gold Dredging in Alaska and the Yukon.*—Mng. Mag., Jan.,1912, p. 45; 2000 w*; 45c.

Janin, Chas.—*Review of Gold Dredging in* 1911; [Ariz.; Colo.; Idaho; Mont.; Nev.; Oreg.; S. Dak.; Brit. Columbia; Victoria, Australia].—M. & S. P., Jan.13,1912, p. 101; 3000 w*; 20c.

Jennings, H.—*Gold Dredging at Ruby, Montana.*—M. & S. P., Jan.6,1912, p. 84; 1500 w*; 35c.

Johnson, W. W.—*Tin Dredging in the Seward Peninsula, Alaska.*—Mex. Mng. Jnl., May,1912; p. 18; 750 w*; 25c.

Linderman, E. F.—*A Disc Anchor for Mooring Floating Plant* [Upper Mississippi River Improvement].—Engg. & Contractg., Jan.31,1912; p. 121; 500 w*; 25c.

Martin, Al. H.—*Dredging Previously*

Worked Deposits; [Oroville, Cal.].—Mining & Engg. World, Dec.9,1911, p. 1174; 1200 w; 10c.
Reprinted in Los Angeles Mng. Rev., Jan.6,1912; p. 10; 1200 w*; 20c.

Martin, Al. H.—*Status of the World's Gold Dredging Industry.*—Mines & Methods, Feb.1912; p. 411; 1200 w; 25c.

Martin, Al. H.—*Evolution of the California Dredge.*—Mines & Methods, Jan.,1912; p. 379; 1800 w*; 35c.

Martin, A. H.—*Innovations in California Dredging Fields in* 1911.—Mining & Engg. World, Feb.24,1912; p. 446; 1500 w; 10c.

Martin, Al. H.—*The First Steel Dredge in California.*—Mng. Sci., Feb.8,1912; p. 146; 1400 w; 20c.

Martin, A. H.—*Gold Dredging in the Folsom Field of California.*—Mining & Engg. World, May25,1912; p. 1091; 2100 w*; 10c.

Martin, Al. H.—*Steel for California Dredges.*—Mng. Jnl., May4,1912; p. 451; 1500 w; 35c.

Martin, Al. H.—*Converting Tailings to Commercial Products;* [Natomas dredge debris used for building stone in California].—Mines & Methods, May,1912; p. 478; 3000 w*; 20c.

Martin, Al. H.—*Reducing California Dredging Costs;* [Economies in large-size buckets].—Mines & Minerals, June,1912; p. 678; 1500 w; 35c.

Martin, Al. H.—*Electrical Equipment of California Dredges.*—Mining & Engg. World, Dec.16,1911, p. 1227; 1500 w; 10c.

Paulmann, and Blaum, —. *Neuere Baggerkonstruktionen;* [Innovations in dredging and dredge construction; Elmer dredges and various dredge-elevators].—Ver. Deu. Ingrs. Zts., Nov.18,1911, p. 1923-1931*; Nov.25, pp. 1970-1976*; $1.00.

Perry, O. B.—*Yukon Gold;* [Review of dredging and sluicing operations of Yukon Gold Co. in 1911].—M. & S. P., May11, 1912; p. 658; 1400 w; 20c.

Pitmann.—*Gold and Tin Dredging and Mining, N. S. W.,* 1911.—See under Tin.

Powell, B. F.—*Cost of Building a 2½ Cu. Yd. Dipper-Dredge, and its First Season's Work;* [Fort Lyon Canal Co., Las Animas, Colo.].—Engg. & Contractg., May29,1912; p. 605; 500 w; 20c.

Pratt, J. M.—*Dredges and Dredging in Mobile Harbor, Ala.; Records and Costs.*—Engg. & Contractg., March20.1912; p. 312; 4000 w*; 20c. From Prof. Memoirs U. S. Engrs., March-April, p. 157-198*; 65c.

Prelini, Chas.—*Dredges and Dredging.*—London, 1911; pp. —*; $4 (book).

Redepenning, —. *Beiträge zur Kenntnis einiger wichtiger Goldvorkommen in Amerika;* [Some of the most important gold deposits of America; Alaska; French Guiana dredging].—Zts. f. Berg-, H-, & Salinenwesen, Vol. 59, No. 5; 1911; pp. 695-707; $1.15.

Richard, L. M.—*Modern Gold Dredge in Georgia;* [California-type dredge in Dahlonega district].—E. & M. J., Apr.27,1912; p. 848; 1200 w*; 25c.

Saunders, W. L.—*Current Practice in Drilling, Blasting and Dredging Rock under Water;* [Read to 12th Internatnl. Congr. of Navigation].—Engg. & Contractg., Apr.24, 1912; p. 463; 5000 w; 20c.

Springer, J. F.—*Mechanical Appliances on the Panama Canal; Part 4: Dredging and Concrete Construction.*—Cassier's Mag., May,1912; p. 442-462*; 35c.

Tyssowski, J.—*Gold Dredge Installations During* 1911; [Alaska; Cal.; Idaho; Mont.; S. Dak.; Yukon].—E. & M. J., March16, 1912, p. 555; 1000 w; 25c.

Weis, S. J.—*Dredging for Gold;* [Advocates adaptability of equipment to local conditions].—Mng. Mag., March,1912; p. 212; 1000 w; 35c.

———. *A California Steel Dredge;* [at Folsom].—Iron Age, May2,1912; p. 1092; 750 w; 30c.

———. *A Portable Gravel Digging and Screening Plant;* [Superior Sand & Gravel Co., Michigan].—Engg. & Contractg., May 29,1912; p. 600; 500 w*; 20c.

———. *Dredging at Pato, Colombia.*—M. & S. P., May4,1912; p. 629; 800 w*; 20c.

———. *Emmaville Tin Field, N. S. W.;* [Recent dredging progress].—Australian Mng. Standd., Nov.30,1911, p. 548; 1000 w; 35c.

———. *Largest Dredging Plant in the World;* [Equipment and operations of dredging fleet of U. S. government].—Engg. News, May9,1912; p. 866; 4000 w; tables; 25c.

———. *Methods of Restoring Soil on Dredged Areas and Costs of Gold Dredging in Australia.*—Engg. & Contractg., March13, 1912; p. 287; 1200 w; 20c.

———. *Motor-Operated Dredge in Coral Rock;* [Cutter-arm dredge "Turbine," Pearl Harbor, Hawaii].—Engg. News, June13, 1912; p. 1105; 1000 w*; 25c.

———. *Progress of the River Dredgings;* [Transvaal].—S. Afr. Mng. Jnl., May 4,1912; p. 346; 500 w; 35c.

———. *The Weeks 2-Line Shovel.*—Mining & Engg. World, Jan.13,1912, p. 94; 400 w*; 10c.

———. *Type of Modern Dredge with Electric Power Installation.*—Los Angeles Mng. Rev., March30,1912; p. 8; 1000 w*; 20c.

———. *Unsound Company Promotions;* [Discusses Hills Bar Gold Dredging Co., caisson dredging on Fraser river, B. C.].—Brit. Columbia Mng. & Engg. Record, Feb., 1912; p. 198; 2200 w; 35c.

EXAMINATION OF DREDGING GROUND

Dennis, F. J.—*Examination of Dredging Properties.*—Amer. Inst. Mng. Engrs., Bull. 64, Apr.,1912; pp. 407-410; $1.15.
Abstract in Mng. Sci., May9, p. 411; 1600 w; 20c. Also in Mex. Mng. Jnl., June,1912; p. 41; 1600 w; 25c. Also in S. Afr. Engg., June, p. 106; 1000 w*; 35c. Also in Mining & Engg. World, Aug. 3, p. 198; 1600 w; 10c.

Martin, Al. H.—*Exploring Dredging Ground.*—Mines & Methods, Dec.,1911, p. 351; 1600 w; 25c.

Morineau,—. *Nouvelle Méthode de sondage des alluvions par le vide;* [Morineau vacuum process for drilling and sampling prospect holes in placer deposits.—Rev. Noire, Jan.7,1912, p. 10; 1400 w; 35c.

Siegel, F. J.—*Examination of Dredging Ground;* [Discusses Dennis' paper].—Mng. Sci., June13,1912; p. 514; 700 w; 20c.

Perret, L.—*Gold and Platinum Alluvial Deposits in Russia;* [Methods of prospecting and working].—Instn. of Mng. & Met'l'gy, Bull. 92, May,1912; 34 pp*; 50c.
Abstract on "Prospecting Frozen Alluvial Deposits," in Mining & Engg. World, June 15, p. 1247; 4000 w*; 10c. Also in Mng. Sci., June20, p. 929; 2000 w; 20c.

SLUICING AND HYDRAULICKING.

Cirkel, F.—*Hydraulicking in Beauce County, Quebec.*—E. & M. J., June1,1912; p. 1083; 4800 w*; 25c.

Eddy, L. H.—*Cross System Gold Saving Tables;* [on Oroville dredges, California].—E. & M. J., Feb.24,1912; p. 396; 1000 w*; 25c.

Flinn, A. D.—*Protection of Steel Pipes;* [Read to N. Engl. Water Works Asso.; abstract].—Canadian Engr., Jan.25,1912; p. 205; 3000 w*; 25c.

Van Gilder, L.—*The 48-inch Wood-Stave Force Main at Atlantic City, N. J.;* [read to Amer. Water Works Asso.; abstract].—Engg. Record, June15,1912; p. 666; 1000 w; 25c.

Haley, C. S.—*Elevating 10-ct. Gravel at a Profit;* [Elevator system of hydraulic gold mining in California and Oregon].—M. & S. P., Apr.13,1912; p. 530; 3600 w*; 20c.

Hazard, F. H.—*A New Design for Undercurrent Grizzly;* [In northern California hydraulic mines].—E. & M. J., Jan.27,1912, p. 207; 1500 w*; 25c.

Heinly, B. A.—*Los Angeles Aqueduct Siphon.*—Municipal Jnl., Jan.4,1912; p. 6; 1000 w*; 25c.

Hosea, R. M.—*Measuring the Flow of Water in Large Pipe Lines.*—Western Soc. of Engrs., Jnl.; Jan.,1912; p. 35-48*; 65c.

Johnson, R. D. O.—*Flume Construction in Colombia.*—E. & M. J., March30,1912; p. 649; 1600 w*; 25c. Abstract in Engg. & Contractg., Apr.17, p. 449; 750 w*; 20c.

Critical review by E. McCullough in Engg. & Contractg., May1, p. 487; 500 w; 20c.

Loggin, N. A.—*Notes on Placer Mining, With Special Reference to Hydraulic Sluicing;* [Read to Instn. of Mng. & Met'l'gy; abstract].—Mines & Minerals, March,1912, p. 507; 7500 w*; 35c.

Mendenhall, H. D.—*An Efficient Cheap Dam;* [For settling ponds in Florida phosphate fields].—Engg. News, Feb.22,1912; p. 338; 1200 w*; 25c. Abstract in E. & M. J., March9, p. 491; 800 w*; 25c.

Merriman, M.—*Treatise on Hydraulics.*—London, 1912 (9th edition); pp. —; $5; (book).

Van Norden, R. W.—*Puget Sound Traction, Light & Power Co.'s System;* [Includes extensive notes and illustrations concerning flumes].—Jnl. of El'y Power & Gas, June1, 1912; p. 511-552*; 35c.

Overstreet, R. M.— *Hydraulic Excavation Methods in Seattle;* [Jackson St. regrade].—Engg. Record, May4,1912; p. 480; 3200 w*; 25c.

Perkins, F. C.—*Wooden-Stave Water Pipe;* [48-inch pipe 5 miles long, in Oregon].—Mines & Minerals, May,1912; p. 620; 500 w*; 35c.

Perry, O. B.—*Yukon Gold;* [Review of dredging and sluicing operations of Yukon Gold Co. in 1911].—M. & S. P., May11, 1912; p. 658; 1400 w; 20c.

Reed, F.—*A Submerged Flexible-Joint Main;* [Carrying a placer-mining conduit under the rapid Taramakau river, N. Z.].—Instn. of Mng. & Met'l'gy. Bull. 88, Jan., 1912, p. 1-9*; 50c. Abstract in Engg. News, Apr.4,1912; p. 641; 2000 w*; 25c.

Sperling G.—*Timber Expansion in Flumes; Causes and Remedies;* [Experiences in Boise County placers, Idaho].—Mining & Engg. World, March16,1912; p. 609; 1600 w; 10c.

Abstract in Engg. & Contracting, Apr.17, p. 450; 1000 w.; 20c. Also in Canadian Engr., Apr.25, p. 578; 1400 w; 25c.

Stone, S. R.—*The Conservation of Water for Hydraulic Sluicing;* [Instances of impounding small streams in Queensland placer districts].—Mining & Engg. World, June1,1912; p. 1135; 2500 w*; 10c.

Stovall, D. H.—*Bridging Chasms with Pipe Lines;* [Suspended sluice in southern Oregon].—Mng. Sci., Jan.4,1912, p. 7; 1000 w*; 20c.

Union Iron Works Co.—*Volumes of Water Required for Effective Hydraulicking.*—Engg. & Contractg., June12,1912; p. 656; 1000 w; tables; 20c.

Verloop, J. H.—*The Surinam Gold Industry.*—Amsterdam, 1911; 106 pp*; (book).

———. *Alluvial Tin Mining.*—Mng. Mag., Apr.,1912; p. 244; 2400 w*; 35c.

———. *A Metal Flume Without Cross-Ties.*—Engg. News, Dec.28,1911, p. 784; 500 w*; 25c.

———. *Hydraulic Regrading in Portland, Oregon.*—Engg. News, May16,1912; p. 909; 300 w*; 25c.

———. *Notable Work on the Catskill Aqueduct;* [Siphons]. — Canadian Engr., Feb.29,1912; p. 342; 1200 w*; 20c.

———. *Peninsula Gold Mining Syndicate; Sluicing Works on the Palmer River.*—Queensl. Govt. Mng. Jnl., Dec.,1911, p. 618; 1000 w*; 35c.

———. *Riffles for Saving Placer Gold;* [From California Mng. Bureau, Bull. 57].—Brit. Columbia Mng. & Engg. Record, Nov., 1911; p. 105; 500 w; 35c.

———. *Steel Siphons for New York's Water Supply.*—Iron Age, Feb.29,1912; p. 520; 750 w*; 30c.

———. *Two Types of Metal Flumes for Irrigation Conduits;* [Lennon and Hess types].—Engg. & Contractg., Jan.31,1912; p. 133; 600 w*; 25c.

———. *Une exploitation de phosphates pebble en Amérique;* [The Prairie Pebble Phosphate Co. plant, Florida].—Phosphate, May13.1912; p. 397; 1000 w*; 35c.

For additional papers on water measurement, sluice and flume construction, etc., see Hydraulics under "Power and Machinery."

EXCAVATORS; POWER SHOVELS; STRIPPING

Colvin, F. H.—*Keeping Shovels at Work at Panama.*—Amer. Machinist, Jan.25, 1912; 5 pp.; 35c.

Dixon, Chas.—*Limonite Prospecting and Mining* [Open-cut mining in Virginia].—Mines & Minerals, March,1912, p. 483; 2200 w*; 35c.

Gold, K.—*Ueber Bagger mit elektrischen Betriebe;* [Some European dredges, scrapers, and shovels operated electrically].—Montanist. Rundschau, Jan.16,1911; p. 57-62; 3000 w*; 45c.

Goodrich, H. C.—*Steam Shovels and Ore Shipping at Bingham, Utah;* [Read to Utah Soc. of Engrs., abstract].—Salt Lake Mng. Rev., Oct.30,1911, p. 18; 1800 w, 25c. Also in M. & S. P., Nov.11, p. 624; 1800 w*; 20c. Also in Mining & Engg. World, Dec. 2,1911, p. 1114; 2000 w*; 10c. Also in Los Angeles Mng. Rev., Jan.6,1912, p. 6; 1800 w*; 20c.

Ijams, J. W.—*Cheap Stripping with Shovels Near Surface;* [Stripping in open-cut coal mines near Danville, Ill.].—Black Diamond, Jan.27,1912; p. 20; 1200 w*; 30c.

Abstract in M. & S. P., March16, p. 410, 800 w; 20c.

Kammerer, —. *Versuche mit Selbstgreifer;* [Tests of two Krupp grab buckets].—

Ver. Deu. Ingr., Zts., Apr.20,1912; p. 617-622*; 75c.

Klein, —. *Die Klebersche Gleisrückmaschine;* [Kleber strippling machine at the Ilse lignite mines, Germany].—Braunkohle, March15,1912; p. 789-792*; 50c.

Massey, G. B.—130-*Ton Steam Shovel for Rock Work.*—Engg. News, Jan.25,1912; p. 150; 1300 w*; 25c.

Niess, Dr.—*Tagebau- und Tiefbaubetrieb beim Braunkohlenbergbau;* [Methods in surface and underground lignite mining].—Halle, 1911; pp. —; (book).

Post, R. E.—*Doubletrees for Heavy Slip and Fresno Scraper Work.*—Engg. & Contractg., March6,1912; p. 264; 250 w*; 20c.

Sanio, P.—*Der Arbeitsverbrauch des elektrischen Trockenbaggers;* [Work performance of electric stripping and power shovels.]—Elektr. Kraftbetriebe & Bahnen, Jan.24,1912, pp. 41-44; 75c. Abstract in Elektrotechnik & Masch Bau, March10, 1912, p. 214; 500; 35c.

Sanio, Paul.—*Ueber die Wirtschaftlichkeit moderner Trockenbagger und verwandter Bodenförderungs-Anlagen;* [Comparative efficiency of modern power shovels and related equipment].—Berlin Techn. Hochschule dissert; 1911; 164 pp.; 20 figs; (thesis).

Springer, J. F.—*Mechanical Appliances on the Panama Canal;* [Power shovels, stone channelers, car unloading].—Cassier's Mag., Apr.,1912; p. 326-343*; 35c.

Thimm, —. *Die Beseitigung der Kesselasche in Braunkohlenwerken durch den Mammutbagger;* [Handling boiler ashes in lignite plants by means of power shovels]. —Braunkohle, May3,1912; pp. 65-67*; 50c.

Tupper, C. A.—*Mining of Shallow Deposits with Steam Shovels;* [Missionfield, Ill., coal mines].—Mining & Engg. World, Jan. 13,1912, p. 59; 1500 w*; 10c.

Wielandt, W.—*Dr. Wielandt's Peat Machine;* [Excavator of continuous stripping type].—Amer. Peat Soc., Jnl; Jan.,1912; p. 151; 1500 w*; $1.40. Abstract in Canadian Engr., May23, p. 694; 1300 w*; 25c.

Williams, A. F.—*The Kimberley System of Rock Handling;* [Read to S. Afr. Inst. of Engrs; author's reply to discussion].—S. Afr. Mng. Jnl., May4,1912; p. 366; 2500 w; 35c.

Wintermeyer, —. *Neuere Selbstgreiffer mit grosser Oeffnungsweite;* [Newer wide-apertured grab buckets].—Glückauf, Dec. 23,1911; p. 1992-1996*; 50c.

Woodbridge, D. E.—*Mining and Concentrating the Sydvaranger Iron Ores.*—Engg. Mag., April,1912; pp. 9-21*; 35c.

———. *A 150-Ton Revolving Steam Shovel for Stripping Operations;* [at Missionfield, Illinois, coal mines].—Engg. & Contractg., Dec.20,1911, p. 650; 500 w*; 25c.

———. *A Drag-Line Excavation Bucket with Chain Connections.*—Engg. & Contractg., Jan.3,1912; p. 7; 500 w*; 25c.

———. *A New Type of Scraper Bucket and Excavator Engine.*—Engg. & Contractg., Jan.31,1912; p. 121; 500 w*; 25c.

———. *A Quick-Detachable Grab Bucket;* [Whiting Foundry Equipm. Co.].—Iron Trade Rev., March28,1912; p. 703; 500 w*; 20c.

———. *Bucyrus 80-ton Mining Shovel.*—Iron Trade Rev., March28,1912; p. 705; 750 w; 20c.

———. *Moderne Trockenbagger im Dienste der oberschlesischen Montanindustrie;* [Some modern power shovels and their use in mining in Silesia].—Berg- u. Hüttenm. Rundschau, Jan.20,1912; p. 83; 500 w*; 35c.

———. *Rock and Ore Shoveling Machine;* [Combined scraper and face-conveyor; Myers-Whaley Co. machine].—Iron Age, May23,1912; p. 1289; 500 w*; 30c.

———. *Selbstgreifer;* [Some German high power clam-shell buckets].—Erzbergbau, Feb.1,1912; p. 37; 1000 w*; 35c.

———. *Sinking an Open Well with a Clam-Shell Bucket.*—Engg. Record, Feb.3, 1912; p. 124; 500 w*; 20c.

———. *Steam-Shovel Dipper Trips Used on the Panama Canal;* [From Canal "Record" of Nov.8,1911].—Engg. News, Jan.25, 1912; p. 159; 1000 w*; 25c. Also in E. & M. J., March2, p. 447; 1000 w*; 25c. Also in Cement Age, March, p. 142; 1000 w*; 25c.

———. *Stripping Made Possible by Improved Machines;* [Practice in eastern Kentucky coal fields].—Black Diamond, Apr.20, 1912; p. 20; 1500 w*; 30c.

———. *The Weight and Expansion of Excavated Earth.*—Engg. News, March21, 1912; p. 545; 800 w; 20c.

———. *Trench Excavation by Steam Shovel;* [System in Staten Island, N. Y., sewerage system].—Municipal Jnl., Jan.4, 1912; p. 1-4; 1500 w*; 25c.

———. *The Utilization of Crude Petroleum for Electric Power Generation;* [Oil

———. *Ueber die Verwendung roher lignitischer Braunkohle zur Darstellung von Generatorgas;* [The use of woody lignitic coals in gas-producers, especially the West-gas-producers and electricity from gas-engines at Los Angeles, Cal.].—El. Rev. (London), Dec.8,1911, p. 934; 2600 w*; 35c. 65c.

Drilling; Boring

DIAMOND AND CORE DRILLING

Bateman, G. C.—*Determining the Angle of Diamond Drill Holes;* [Read to Canadian Mng. Inst., Porcupine branch].—Canadian Mng. Jnl., March1,1912, p. 167; 1000 w*; 25c.

Hall, A. E.—*Speeds and Cost of Diamond Drilling at Porcupine, Canada.*—Columbia School of Mines, Quar'ly, April,1912; pp. 229-232; 1500 w; 65c.

Abstract in Engg. & Contractg., Apr.24, 1912; p. 462; 1000 w; 20c. Also in Mng. Sci., May30, p. 475; 1000 w; 20c.

Heys, W.—*Boring for Coal by Methods Giving Solid Cores of the Strata Passed Through.*—Sci. & Art. of Mng., June8,1912; p. 525; 1200 w*; 35c.

Hoffman, J. I.—*Recent Practice in Diamond Drilling and Borehole Surveying;* [on the Rand].—Instn. of Mng. & Met'lgy, Bull. 91; April, 1912; pp. 11*; 50c. (Discussion), Bull. 92, May, p. 23-33; 50c.

Abstract in Coll'y Guardn., Apr.26, p. 829; 4000 w*; 35c. Also in S. Afr. Engg., April, p. 61; 1800 w*; 35c. Also in S. Afr. Mng. Jnl., May4, p. 355; 3000 w; 35c. Also in Mining & Engg. World, May11, p. 1002; 4500 w*; 10c. Also in E. & M. J., May18, p. 980; 500 w*; 25c. Also in Mex. Mng. Jnl., Aug., p. 26; 4000 w*; 25c.

Meuche, A. H.—*Some Practical Suggestions for Diamond-Drill Explorations;* [with special reference to Superior copper region].—Lake Superior Mng. Inst., Proc., 1911; pp. 77-81*.

Abstract in Mng. Sci., Sept.7,1911, p. 220; 1500 w*; 20c. Also in M. & S. P.,

Sept.16, p. 357; 700 w*; 20c. Also in Mines & Methods, Sept., p. 317; 1000 w*; 20c. Also in Mining & Engg. World, March30, p. 706; 1500 w*; 10c.

Thomson, G. W.—*Diamond Drill Results at Pearl Lake, Porcupine, Ont.*—Canadian Mng. Jnl., Apr.1,1912; p. 238; 200 w; 25c.

White, E. E.—*Surveying and Sampling Diamond Drill Holes;* [Surveying deflected prospect borings in Lake Superior iron region].—Lake Superior Mng. Inst., Proc., 1911; pp. 100-120*.

Abstract in E. & M. J., Sept.23,1911, p. 587; 3500 w*; 25c. Also in Mines & Minerals, Oct., p. 167; 4500 w*; 35c. Also in Mex. Mng. Jnl., Oct., p. 23; 4500 w*; 25c. Also in Engg. & Contractg., Oct.4, p. 345; 4500 w*; 20c. Also in Mining & Engg. World, Nov.25, p. 1061; 3500 w*; 10c.

———. *Diamantbohrkronen aus Diamantsplittern;* [Diamond chips for the crowns of diamond drills].—Tiefbohrwesen, No. 22, 1911; p. 167; 500 w; 75c.

———. *The Dobbins Core Drill.*—E. & M. J., June8,1912; p. 1135; 500 w*; 25c.

OIL-WELL AND DEEP BORING

Bardeen, H. A.—*Bardeen Electric Rotary Drill; New Well-Boring Apparatus.*—Oil Age, March8,1912, p. 2; 1000 w*; 20c.

Ballagh, C.—*Some phases of Oil-Well Drilling in the Midway Field, California.*—Colo. School of Mines Mag., May,1912; p. 178; 3000 w; 50c.

Bansen, Hans, and others.—*Die Bergwerksmaschinen; I: Das Tiefbohrwesen;* [Mining Machinery; Vol. I: Boring and Deep Drilling; Tools and Methods].—Berlin, 1912; 537 pp., 688 figs.; $5; (book).

Blandow, M.—*Schraubenbohrer für Tiefbohrungen mit Mantel;* [New screw or augur drill with casing for deep boring; German Pat. No. 240,111].—Organ d. . . . Bohrtechniker, March1,1912, p. 58; 500 w*; 35c.

Bowman, I.—*History of Drilling;* [From U. S. Geol. Bull., 1911].—Oil & Gas Jnl., Sept. 14,1911, p. 12; 2800 w; 20c. Reprinted in London Petroleum Review, Dec., 1911.

Abstract in German in Organ d. Bohrtechniker, May1,1912; p. 99; May15, p. 111; 3000 w; 50c.

Castilla, H. C.—*Artesian Boring; Its Inception and Progress in Western Australia;* [Read to W. Aust. Instn. of Engrs.; abstract].—W. A. Mng., etc., Jnl., March16, 1912; p. 14; 1000 w; 35c.

Cramer, H.—*Die Nachweisung von Steinkohlen-Vorkommen in Bohrlöchern;* [The identification and discovery of coal in borings].—Kohle & Erz, Apr.22,1912; p. 386; 2000 w; 35c.

Eddy, L. H.—*Rotary Rig for Deep Drilling;* [in California oilfields].—E. & M. J., Feb.10,1912; p. 301; 500 w; 25c.

Fauck, Alb.—*Die Wassereinbrüche in dem Bohrungen von Tustanovice;* [The water inundations in the Tustanovice oil wells; read to Vienna section].—Ver. Bohrtechniker, Organ; Jan.1,1912, p. 3; 1000 w*; 45c.

Förster-Pasing, B.—*Die zur Aufsuchung von Steinsalz und Kalisalzen im Elsass ausgeführten Tiefbohrungen;* [Prospecting-Drilling the Tertiary beds of Alsace for Potash or Rock Salt].—Geol. L-A. Elsass-Lothringen, Mittlngn., 1911; 175 pp*; $2.00; (book).

Abstract in Organ d. Bohrtechniker, Jan. 1,1912, p. 4; 1800 w; 45c.

Glouschkow, I.—*Das kanadische Bohrsysteme in Galizien;* [The Canadian boring system in Galicia; from Neftyanoye Dyelo].—Organ d. Bohrtechniker, March15,1912; p. 65; 2400 w; 35c.

Hager, D.—*Some Mechanical Features of an Oil Well;* [Casing in California wells].—Mining & Engg. World, March23,1912; p. 651; 1200 w*; 10c. Reprinted in Oil Age, Apr.5, p. 7; 20c.

Menzin, A. L.—*Drilling Boilers in the California Oil Fields.*—Jnl. of El'y Power & Gas, Jan.20,1912; p. 51; 1000 w*; 35c.

Michael, R., and W. Quitzow.—*Temperaturmessungen im Tiefbohrloch Czuchow II, Oberschlesien;* [Temperature records in the Czuchow drill hole, Silesia, world's deepest boring].—Zentralbl. f. Mineralogie, etc.; Feb.,1912; p. 43-45; $1.

Nelson, A.—*Means for Bringing a Deflected Borehole Back to the Vertical.*—Sci. & Art of Mng., May11,1912; p. 474; 600 w*; 35c.

Oakley, E. J.—*Artesian Well Boring in Bengal;* [Read to Mng. & Geol. Inst. of India; abstract].—Indn. & Eastn. Engr., Dec.,1911; p. 225; 1800 w*; 65c.

Pauli, G.—*Abdichten wasserführender Schichten oder dergleichen mittels Betons;* [Cement injection process for shutting off water in drill-holes from water-bearing strata; German Pat. No. 242,339].—Organ d. Bohrtechniker, Apr.15,1912; p. 90; 800 w*; 45c.

Sanderson, R. R.—*Drill Work Methods and Costs; A Practical Treatise Covering the Methods Used in Drilling Wells with Cable and Hollow-Rod Tools.*—Orrville, Ohio; 350 pp*; (book).

Simpson, C.—*Putting Down a Deep Bore-Hole by the American System of Rope Boring.*—Sci. & Art of Mng., May25,1912; p. 495; 1000 w*; 35c.

Smith, J. T.—*Neue galizische Erdölbohrmethode;* [Newer developments in oil-well drilling methods in Galicia; from London "Financial Times"].—Organ d. . . Bohrtechniker, Feb.15,1912; p. 41; 800 w; 45c.

Tecklenburg, Th.—*Handbuch der Tiefbohrkunde; Bd. 4; Das Seilbohrsystem;* [Manual of Deep Drilling; Vol. IV; Cable Drilling].—Berlin, 1911; 132 pp.; 81 figs.; $5.00; (book).

Titus, R.—*Kleine Hubhöhen, grosses Schlaggewicht und Schlagzahl;* [Short stroke combined with heavy and rapid blows in deep drilling].—Organ d. Bohrtechniker, March15,1912; p. 63; 2100 w; 35c.

Titus, R.—*Bohrschwengelantrieb;* [The driving of the walking-beam].—Organ d. Bohrtechniker, May1,1912; p. 97; 1500 w*; 35c.

Titus, R.—*Gleichmässige Belastung des Motors;* [Uniformity or load equalization of the motor in deep drilling].—Organ d. Bohrtechniker, May15,1912; p. 109; 2000 w*; 35c.

Titus, R.—*Seilschlagkonstruction;* [Notes on cable construction and equipment in cable drilling].—Organ d. . . Bohrtechniker, March1,1912, p. 55; 1200 w*; 35c.

Titus, R.—*Schlageffekt, Fallzeit und Schlagzahl;* [Relation between stroke efficiency, time duration of descending blow, and rapidity of blows].—Organ d. . . Bohrtechniker, Feb.15,1912; p. 39; 1200 w; 45c.

Titus, R.—*Zur Stosswirkung der Schwerstange;* [The stroke-effect of the walking beam].—Organ d. Bohrtechniker, Feb.1, 1912; p. 27; 600 w; 35c.

Titus, R.—*Einiges über Dickspülung;* [Clay-slime coating and injection in bore

holes].—Organ d. Bohrtechniker, Jan.1, 1912, p. 6; 600 w; 45c.

Titus, R.—*Exzentermeissel mit in der Schwerpunktslinie des Bohrzeugs verlaufenden Rückstoss;* [Excentric bit with return lift within the drill weight or hammer; and effect on bore deflection].—Organ d. Bohrtechniker, Dec.15,1911, p. 289; 1600 w*; 45c. (Discussion), Feb.1, p. 26; 1000 w*; 45c.

Titus, R.—*Das Hohlgestänge und seine Bewegungswiderstände;* [Hollow drill rods and their resistance].—Organ d. Bohrtechniker, June1,1912; p. 121; 3000 w*; 45c.

Titus, R.—*Neuartige Anordnung der Flaschenzugseilrollen;* [New pulley-tackle arrangement in cable drilling].—Petroleum, May1,1912; p. 828; 500 w*; 45c.

Ulmcke, H. L.—*Die Bohrrohrfabrikation des Bakuer Bezirkes im Jahre* 1911; [Manufacture of oil-well casing and tubing in Baku oil fields, 1911].—Organ d. . . Bohrtechniker, Feb.15,1912; p. 37; 2200 w*; 45c.

Ursinus, O.—*Kalendar für Tiefbohr-Ingenieure, -Techniker, -Unternehmer und Bohrmeister; Handbuch für Petroleumfachleute;* [Yearbook for Deep-Drillmen, etc.]. —Frankfurt a. M.; 1911; pp. —; 300 figs; $2.50 (book).

Voit, St.—*Die Verwendung der Drahtseile im Petroleum-Plunger Betrieb;* [Specifications, testing and use of steel cables for boring by the Canadian system].—Petroleum, Feb.21,1912; p. 537; 3500 w*; 50c.

Werlitz, H.—*Ausnutzung der naturlichen Gase bei der Erdölgewinnung;* [Gas-engines and electric power generation from waste natural gas in the Campina and Moreni oil fields, Roumania; and on electric drilling]. —Ver. Deu. Ingr., Zts., Oct.28,1911, p. 1807; 500 w*; 50c.

E. G.—*Die Bohrverhältnisse auf dem Grosny Erdölfelde;* [Drilling practice in the Grosny oil field; from Neftyanoye Dyelo]. —Organ d. Bohrtechniker, Jan.1,1912, p. 7; Jan.15, p. —; 2500 w; 75c.

———. *A Modern Drilling-Tool Factory;* [Describes works at Ekaterinodar for Maikop field].—Petroleum World, April,1912; p. 168; 1600 w*; 35c.

———. *A Remarkable Borehole;* [702-ft. nearly horizontal hole in colliery near Leeds, Engl.].—Coal Age, March23,1912; p. 778; 500 w*; 20c.

———. *Casing Used in California Fields;* [From "Oil City Derrick"].—Well Drillers' News, May,1912; p. 11; 600 w; 10c.

———. *Das tiefste Bohrloch der Erde;* [The world's deepest boring; Czuchow, Upper Silesia].—Kohle & Erz, Jan.22,1912, p. 76; Jan.29, p. 98; 7000 w*; 50c.

———. *Deep Coal Mine Shafts, and Deep Drill Holes.*—Mines & Minerals, May, 1912; p. 598; 600 w; table; 35c.

———. *Improved Stove-Pipe Casing; Tongue and Slot-Joint Fastenings.*—Oil Age, Feb.23,1912; p. 2; 1000 w*; 20c.

———. *Stahlbohrgerüsten;* [Steel drill derricks].—Petroleum, March20,1912; p. 665; 500 w*; 45c.

———. *The Raky Boring System in the Kent Coal Field.*—Iron & Coal Trades Rev., May17,1912; p. 805; 750 w; 35c.

PROSPECTING DRILLS

Morineau, —. *Nouvelle Méthode de sondage des alluvions par le vide;* [Morineau vacuum process for drilling and sampling prospect holes in placer deposits].—Rev. Noire, Jan.7,1912, p. 10; 1400 w; 35c.

Simpson, C.—*Method and Tools Required for 200-ft. Bore-Hole by Hand Power.*—Sci. & Art of Mng., March30,1912; p. 399; 1000 w*; 35c.

STOPE DRILLING

See also Stoping, etc., under "Sinking and Driving."

Brown, H. S.—*Placing Holes in Breast Stoping.*—E. & M. J., May4,1912; p. 882; 200 w; 25c.

Jacquelin, A.—*L'emploi des marteaux pneumatiques dans les mines de houille;* [Use of air hammer drills in French coal mines; read to Soc. d. Ingrs. Civils, France; abstract].—Echo d. Mines, May27, 1912; p. 617; 900 w; 35c.

Pütz, O. — *Die Handbohrmaschinen;* [Hand Rock-Drills].—Kattowitz, 1911; 63 pp; 49 figs; $1 (book).

———. *L'emploi du marteau pneumatique dans les mines de fer;* [Pneumatic hammer drills in the iron mines of Meurthe-et-Moselle, France].—Soc. Amicale d. Mineurs de Douai, Nov.25,1911, p. 751; 1000 w; 35c.

———. *Machine Drills on the Rand.*—S. Afr. Mng. Jnl., Apr.6,1912; p. 192; 1200 w; 35c.

———. *Cost of Machine Drilling at Alaska-Treadwell.*—E. & M. J., Apr.13,1912; p. 741; 300 w; 25c.

———. *Machine Drilling in Stopes.*—S. Afr. Mng. Jnl., Feb.3,1912; p. 784; 500 w; 35c.

———. *New System of Drilling in Stopes at the Jupiter Mine.*—S. Afr. Mng. Jnl., Dec.9,1911, p. 487; 600 w*; 35c.

———. *Stoping Drills in a Tunnel;* [Kingwood tunnel, B. & O. R. R.].—Mine & Quarry, March,1912; p. 595; 500 w*; 25c.

DRILL STEEL; BITS; ACCESSORIES

Blackburn, W.—*Design and Maintenance of Rock Drill Bits.*—Compr. Air Mag., June, 1912; p. 6451; 2500 w*; 25c. Also in E. & M. J., May11, p. 927; 2100 w*; 25c.

Mendelsohn, Alb.—*Improved Drill Post Collar.*—E. & M. J., May18,1912; p. 979; 500 w*; 25c.

Semple, C. C.—*Tempering Drill Steel.*—E. & M. J., May11,1912; p. 931; May18, p. 981; 2100 w; 40c.

———. *Drill Post with Removable Screw* [in Michigan copper mine].—E. & M. J., Feb.24,1912; p. 395; 400 w*; 25c.

———. *Expansion Bit for Drilling Coal.* —Coal Age, May18,1912; p. 1050; 400 w; 20c.

———. *Handling Drill Steel at Champion Mine.*—E. & M. J., May4,1912; p. 881; 800 w; 25c.

———. *Scaffolding for Drills in Wide Stopes.*—E. & M. J., Feb.24,1912; p. 399; 400 w*; 25c.

———. *Rack for Drill Steel.*—M. & S. P., May11,1912; p. 667; 150 w*; 20c.

DRILL DUST PROBLEM

See also, for coal dust, under "Ventilation," and under "Hygiene; Safety Rescue."

Jourdan, C. J. N.—*The Prevention of Dust in the Development of Drives of Mines During Drilling Operations;* [Watering holes while drilling; read to S. Afr. Inst. of Engrs.; abstract].—S. Afr. Mng. Jnl., Sept. 16, 1911, p. 43; March 16, 1912, p. 65; 5000 w; 50c. Also in S. Afr. Engg., Oct. 31, 1911, p. 59, p. 76; 1500 w; 35c. Also in W. Australian Mng. etc. Jnl., Dec. 9, p. 7; 1800 w, 35c.

Reviewed in Engg & Contractg., Jan. 10, 1912, p. 35; Jan. 17, p. 58; 1300 w; 30c.

———. *Das Stossträuken in Kohlenbergwerken;* [Overcoming the coal dust danger by drenching the coal face by drill holes]. —Kali Erz & Kohle, March25,1912; p. 305; 1000 w; 35c.

DRILL HOLE PREPARATION FOR BLASTING

See under "Explosives and Blasting."

MISCELLANEOUS

Eriksson, Hj.—*En modern svensk borrmaskinsanläggning;* [A modern Swedish compressed-air rock-drill works, Nya Atlas Co., Stockholm]. — Jernkontor. Annaler, Oct.,1911; pp. 797-812*; 45c.

Freyberg, M.—*Ueber neuere Bohrmaschinen;* [Newer types of drills].—Erzbergbau, Apr.1,1912; (Special drilling issue); pp. 97-118; 13,000 w*; 45c.
Abstract in Techn. Blätter, May18, p. 156; May25, p. 165; 2000 w; 50c.

Gilbert, G. H.; L. I. Wightman; and W. L. Saunders.—*The Subways and Tunnels of New York; Methods and Costs.*—New York; 1912; 372 pp*; $4; (book).

Gjuke, G. E.—*En hydropneumatisk bergboermaskin;* [Atlas hydropneumatic rock-drill].—Jernkontor. Annaler, Bihang; Feb., 1912; pp. 112-123*; 45c.

Hanff.—*Entwässerung von Grubenfeldern durch Pressluftpumpen;* [Mine drainage by compressed-air pumps and drill holes].—Braunkohle, March29,1912; p. 821-824*; 50c.

Henker, L.—*Bohrmaschinelle Bergbaubetriebe;* [The drills used in mining].—Oestr. Zts. f. Berg- & H-wesen, March9,1912; p. 127; March16, p. 146; March23, p. 160; March30, p. 177; Apr.6, p. 193; 3200 w*; $1.50.

Hirschberg, C. A.—*Winter Operations in a Quarry;* [Electric air drilling at Buffalo Cement Co. plant, N. Y.].—Compr. Air Mag., June,1912; p. 6449; 1200 w*; 25c. Also in Engg. & Contractg., Apr.3,1912; p. 375; 1000 w*; 20c.

Kändler, H.—*Elektrischer Gesteinsbohrhammer für Bauzwecke;* [Püschel electric hammer drill].—Oestr. Ingr. & Archt. Ver., Zts; March22,1912; p. 186; 500 w*; 35c.

Koch, M.—*A Review of Methods Employed for Removing Subaqueous Rock;* [Read to Internatnl. Congr. of Navigation; abstract].—Engg. & Contractg., May29, 1912; p. 602; 2000 w; 20c.

Kröning, E. E.—*Pressluftwerkzeuge im Grubenbetriebe;* [Compressed-air tools used in mining; drills and coal picks].—Kali Erz u. Kohle, Dec.5,1911, p. 1219; 1800 w*; 35c.

Liwehr, E.—*Verwendung von Pressluft im Bergbaubetriebe;* [Applications of compressed air in mining; I: Drifting and stoping; II: Drilling and drills].—Zts. f. Kompr. Gase, Dec.,1911, pp. 41-45*; Jan., 1912, pp. 67-72*; Feb., pp. 81-86*; $1.50.

Meuskens, C.—*Neuere Systeme selbsttätiger Vorschubeeinrichtungen für Druckluftbohrhämmer;* [New devices for automatic forward thrust in compressed-air drills].—Kali, March15,1912; p. —; Apr.1, p. 162; 5500 w*; 65c.

Rüdel, R.—*Eine neue Methode zum Entwässern von Grubenfeldern;* [Historical development of the practice of unwatering mines by drill-holes].—Zentral Verbd. Bergbau Betriebsl. Oestr., Zts., March15,1912; p. 169; 1200 w; 45c.

Sanderson, R. R.—*A Cost and Time Study of Big Blast Hole Drilling with Well Drills.* —Natnl. Lime Manfrrs. Asso., Proc. for Feb.,1912; pp. —; 50c.
Abstract in Engg. & Contractg., June5, p. 633; 3500 w; 20c.

Saunders, W. L.—*Current Practice in Drilling, Blasting and Dredging Rock under Water;* [Read to 12th Internatnl. Congr. of Navigation].—Engg. & Contractg., Apr.24, 1912; p. 463; 5000 w; 20c.

Williamson, S. B.—*Methods and Costs of Operating Loebnitz Rock Breakers and Drill Boats on the Panama Canal;* [Read to Internatnl. Congr. of Navigation].—Engg. & Contractg., May29,1912; p. 601; 2000 w; tables; 20c.

———. *Bohrmaschinen und Bohranlagen;* [Notes on various types of drills and drilling equipment],—Erzbergbau, Apr.1, 1912; (Special drilling number); pp. 119-127; 5000 w*; 45c.

———. *Comparative Test of Air Drills.* —Coal Age, Apr.6,1912; p. 842; 500 w*; 20c. Also in Compr. Air Mag., June, p. 6454; 500 w*; 25c.

———. *Device for Increasing the Striking Power of Rock Drills;* [Wizard drill of McKiernan-Terry Co.].—Engg. & Contractg., Apr.3,1912; p. 375; 500 w*; 20c.

———. *Perforatrices Rotatives;* [Siemens-Schuckert rotary, or augur, rock-drills].—Fer et Acier, Feb.,1912; p. 17; 2500 w*; 45c.

———. *Reheating Air for Drills.*—E. & M. J., Feb.17.1912; p. 350; 1000 w*; 25c.

———. *The Care of Little Giant Drills.* —Ideal Power, May,1912; p. 35; 750 w; 20c.

———. *The Wizard Rock Drill.*—E. & M. J., Feb.24,1912; p. 416; 1400 w*; 25c.

———. *Versuche und Verbesserungen beim Bergwerksbetriebe,* 1911; [Innovations and improvements in mining practice in Prussia in 1911; drilling and boring].—Zts. f. d. Berg-, H-, & Salinenw., Vol. 60, No. 1; 1912; pp. 80-83*; $1.50. Reprint in Kohle & Erz, May13, p. 498; 2400 w*; 35c.

MECHANICAL CUTTERS (COAL CUTTERS; CHANNELERS; TUNNELERS; STONE SAWS)

Beardsley, S.—*When to Substitute Machine Work for Hand Work, and Advantages to be Gained.*—Sci. & Art of Mng., May11,1912; p. 472; 600 w; 35c.

Deboucq, —. *Emploi d'une haveuse;* [Record of Pick Quick coal cutter at Boubier colliery, Belgium].—Annales d. Mines (Belgiq.), Vol. 17, No. 2; 1912; p. 435; 1200 w*; 95c.

Hutchinson, F.—*Road Laying for Coal Cutters in Long-Wall.*—Sci. & Art of Mng., Dec.23,1911, p. 239; 500 w; 35c.

Koch, M.—*A Review of Methods Employed for Removing Subaqueous Rock;* [Read to Internatnl. Congr. of Navigation; abstract].—Engg. & Contractg., May29, 1912; p. 602; 2000 w; 20c.

Liwehr, E.—*Ist die Stangenabbauschrämmaschine geeignet die Radschrämmaschine zu verdrängen, und welches sind die hiebei in Frage kommenden Wertigkeitverhältnisse zwischen elektromotorischem Antrieb und dem Betriebe mittels komprimierter Luft;* [Punching vs. circular coal cutters and electricity vs. compressed-air drive].—Oestr. Ingr. & Archt. Ver., Zts; Feb.16, 1912; p. 108; 1000 w; 35c.

Rodman, J. C.—*Substitute Methods for Dispensing with Shot-Firing in Mines;* [Various wedges, and lime cartridges].—Sci. & Art of Mng., Jan.20,1912, p. 279; 1500 w*; 35c.

Shaw, W. B.—*Coal Cutting Machinery;* [Review of various types, and merits of electricity vs. compressed air; read to Manchester Asso. of Engrs.; abstract].—Iron & Coal Trades Rev., Dec.1,1911, p. 879; 7000 w*; 35c.
Also in Mechl. World, Dec.1, p. 258; Dec. 15, p. 279; Jan.5,1912; p. 8; Jan.26, p. 39. 7000 w*; 80c. Also in Sci. & Art. of Mng., Dec.9, p. 198; 2000 w; 35c. Also in Electrician, Dec.22, p. 420; 4000 w; 35c. Also in S. Afr. Engg., Dec., p. 109; 4500 w*; 35c. Also in Mng. Engg., Jan.,1912, p. 280; Feb., p. 307; 7000 w*; 50c. Also in Coll'y Guardn., March8, p. 479; March15, p. 527; March22, p.* 584; 7000 w; 80c.

O'Toole, E.—*New Cutting Machine for Coal Mines;* [Jeffrey-O'Toole cutter].—Black Diamond, Jan.6,1912, p. 20; 1000 w*; 30c. Also in Coal Age, Jan.20, p. 476*; 20c. Also in Mines & Minerals, March, p. 466; 1000 w*; 35c.

Springer, J. F.—*Mechanical Appliances on the Panama Canal;* [Power shovels, stone channelers, car unloading].—Cassier's Mag., Apr.,1912; p. 326-343*; 35c.

Williamson, S. B.—*Methods and Costs of Operating Loebnitz Rock Breakers and Drill Boats on the Panama Canal;* [Read to Internatnl. Congr. of Navigation].—Engg. & Contractg., May29,1912; p. 601; 2000 w; tables; 20c.

Wolcott, G. E.—*Breaking Ground Without Powder;* [Advocates channeling system and wedging in metal mining].—E. & M. J., May25,1912; p. 1047; 1600 w*; 25c.

J. P. Kearns Tunnelling Co.—*Tunnel Driving by Modern Methods;* [New Kearns tunnelling machine].—Black Diamond, June 15,1912; p. 22; 250 w*; 30c.

———. *Channeling "Pressure" Stone.*—Mine & Quarry, March,1912; p. 583; 400 w*; 25c.

———. *Development of the Wire Saw.*—Stone Trades Jnl., Feb.,1912; p. 1048; March, p. 1073; 2500 w*; 50c.

———. *Diamant gegen Karborundum;* [Diamond vs. carborundum in stone saws].—Kohle & Erz, March25,1912; p. 294; 750 w; 35c.

———. *Early Coal Cutting Machinery.*—Coal Age, June1,1912; p. 1117; 1200 w*; 20c.

———. *Fortschritte im Bau von Maschinen für den Kohlenbergbau;* [Progress in coal mining machinery].—Ungarische Montanindustrie & Handels Ztg., No. 20, 1911; pp 2-3*; 75c.

———. *Goodman Compressed-Air Breast Machine with Balanced Engine.*—Electr. Mng., April,1912; p. 43; 750 w*; 20c.

———. *Motor-Operated Dredge in Coral Rock;* [Cutter-arm dredge "Turbine," Pearl Harbor, Hawaii].—Engg. News, June13, 1912; p. 1105; 1000 w*; 25c.

———. *Rock and Ore Shoveling Machine;* [Combined scraper and face-conveyor; Meyers-Whaley Co. machine].—Iron Age, May23,1912; p. 1289; 500 w*; 30c.

———. *Statistics of Coal Cutting Machinery in* 1910; [Abstract from official British report].—Coll'y Guardn., Dec.22, 1911, p. 1251; 500 w; tables; 30c.

———. *The "Eckersley" Coal Cutter.*—Iron & Coal Trades Rev., Jan.19,1912, p. 91; 500 w*; 30c.

———. *The Colorado-Yule Marble Property* [Gunnison county; includes notes on channelers and wire-saws].—Stone Trades Jnl., Jan.,1912; 1004; 1200 w*; 35c.

———. *The Electrical Motor in Stone Yard;* [In stone saws].—Stone Trades Jnl., June,1912; p. 1170; 500 w*; 35c.

Explosives and Blasting

PERMISSIBLE EXPLOSIVES

Dautriche, —. *Ueber die Wirkung der für Schlagwetter und Kohlenstaub führende Gruben bestimmten Sprengstoffe;* [The principles of safety explosives for gaseous and dusty coal mines; from Mém. d. Poudres, Vol. 15, pp. 127-129].—Zts. f.. Sprengstoffwesen, Dec.15,1911, p. 473; 1000 w; 35c.

Dautriche, —. *Ueber die naphtite der Soc. Générale pour la Fabrication de la Dynamite;* [New nitro-glycerine safety explosive, Naphtite; from Mém. d. Poudres, Vol. 16, 1912; pp. 54-58].—Zts. f. Sprengstoffw., March1,1912; p. 96; 1200 w; 35c.

Dupuy, J.—*Arrêtes du 27 Fevrier,* 1912, *autorisant l'emploi d'explosifs dans les mines grisouteuses ou poussiéreuses;* [Decrees of Feb. 27, 1912, authorizing additional "permissible explosives" in fiery or dusty coal mines in France, with notes on their composition and use; grisou-naphthaline and dynamite for coal beds, naphthalite and dynamite for rock and ordinary and potash-dynamite gums and Favier No. 1].—Annales d. Mines, April,1912; p. 227-232; 75c.

Fishback, M.—*Utahnite Safety Explosive.*—E. & M. J., May25,1912; p. 1039; 1200 w*; 25c.

Hall, Cl. and S. P. Howell.—*Results of Tests with Permissible Explosives; with Dynamite; with Black Blasting Powder; with Four Foreign Explosives.*—U. S. Bur. Mines, Bull. No. 15; 1912; pp. 118-176; 10c.

Rutledge, J. J., and Cl. Hall.—*The Use of Permissible Explosives.*—U. S. Bureau of Mines, Bull.10,1912; 34 pp*; 10c.

Rutledge, J. J. and C. Hall.—*Blasting by Electricity in Mines; Utah System;* [Abstract from U. S. Bur. Mines, Bull. No. 10].—Mining & Engg. World, June1, p. 1143; 1000 w*; 10c.

Simpson, C.—*Precautions Before Using Explosives on the Permissible List.*—Sci. & Art of Mng., May11,1912; p. 472; 600 w; 35c.

MISCELLANEOUS EXPLOSIVES

Aranaz, Col. D. R.—*Nuevos Explosivos;* [Notes on explosives, with notes on new Spanish compounds, chiefly military].—Madrid, 1912; 68 pp.; $1; (book).

Dautriche, —. *Ueber die Fabrikation von neuen Typen Chloratsprengstoff der Firma Davey, Bickford, Smith & Cie;* [The manufacture of new types of chlorate explosives at the Davey, Bickford, Smith & Co. works; from Bull. 218 of the Explosives Commission of France].—Zts. f. Sprengstoffw., May1,1912; p. 173; May15, p. 195; June1, p. 219; 7000 w*; 90c.

Ebeling, Dr.—*"Miedziankit," ein Ersatz für Dynamit;* ["Miedziankit," a substitute for dynamite].—Oberschles. Berg- & Hüttemn. Ver., Zts.; May,1912; p. 197-214*; 45c. Also in Berg- & Hüttenm. Rundschau, June5, p. 185-192; June20, p. 199; 6000 w; 50c.

Langfurth, A.—*Herstellung und Prüfung von Ammonsalpetersprengstoffen;* [Manufacture and testing of ammonium-nitrate explosives; read to Ver. Deu. Chemiker, Hamburg section].—Zts. f. angew. Chemie, March1,1912; p. 422; 1000 w; 50c.

———. *Liste des poudres et explosifs mis en vente pour servir aux usages de mine;* [List of powders and explosives sold for

mining purposes in France; with compositions].—Journal Officiel, Jan.19,1912; p. 662; table; $1. Also in Annales d. Mines (Paris), Feb.,1912; p. 94-95; 65c.

DRILL-HOLE PREPARATION

Ambrose, E.—*The Sludger Pump, and Its Use in Cleaning Boreholes.*—Sci. & Art of Mng., June8,1912; p. 522; 200 w*; 35c.

Aston, F. J.—*Making, Cleansing, Tamping and Ramming the Drill Hole in Blasting.*—Sci. & Art of Mng., Dec.23,1911, p. 236; 1800 w; 35c.

Kershner, W. T.—*A Test of the Comparative Efficiency of Large and Small Well-Drilled Holes for Heavy Blasting.*—Well Drillers News, March,1912; p. 90; 750 w; 10c.

Russell, S. R.—*Well Drill Hole Blasting.*—Natnl. Lime Mfrrs. Asso., Proc. for Feb., 1912; 10 pp.; 50c. Abstract in Engg. & Contractg., June12, p. 657; 2100 w; 20c.

Rutledge, J. J., and Cl. Hall.—*The Use of Permissible Explosives;* [Includes notes on drilling].—U. S. Bureau of Mines, Bull. 10, 1912; 34 pp*; 10c.

Sanderson, R. R.—*A Cost and Time Study of Big Blast Hole Drilling.*—Natnl. Lime Mfrrs. Asso., Proc. for Feb.,1912; pp. —. Abstract in Engg. & Contractg., June5, p. 633; 3500 w; 20c.

———. *Joplin Scraper and Loading Stick;* [For irregular blasting holes].—E. & M. J., May25,1912; p. 1030; 600 w; 25c.

FUSES AND EXPLODERS

Barthélemy, L.—*Eine neue Anwendung der detonierenden Zündschnur bei öffentlichen Arbeiten;* [New use of detonating fuses in Belgian public works; on the Lys-Yperlée canal and tunnels].—Zts. f. Schiess- u. Sprengstoffwesen, Nov.15,1911, p. 425; Dec.1, p. 445; 3000 w*; 50c.

Bianchi, G.—*Die progressive Entzündung der Ladung und ihr Einfluss auf die Explosionsgesetze;* [The progressive firing of the charge, and influence on the laws of explosibility; translated from "Revista di Artiglieria e Genio"].—Zts. f. Sprengstoffw., Apr.1,1912; p. 130; 3000 w*; 35c.

Brown, H. S.—*Where Should the Primer Go?*—E. & M. J., Apr.,1912; p. 681; 450 w; 25c.

Dautriche, —. *Verbesserung der Empfindlichkeit durch Verwendung der detonierenden Zündschnur als Initialimpuls;* [Improving the sensitiveness of explosives by using detonators for initial impulse; from Mém. d. Poudres, Vol. 15, Nos. 3 and 4, pp. 203-211].—Zts. f. Sprengstoffw., May1, 1912; p. 182; 2000 w*; 35c.

Fuller, J. T.—*Where Should the Primer Go?*—E. & M. J., Apr.13,1912; p. 731; 750 w; 25c.

Gaskell, T.—*Objections to Using Safety Fuse in a Fiery Mine.*—Sci. & Art of Mng., March2,1912, p. 352; 600 w; 35c.

Gunsolus, F. H.—*Where Should the Primer Go?*—E. & M. J., March30,1912; p. 633; 500 w; 25c.

Hall, Cl. and S. P. Howell.—*Investigations of Fuse and Miners' Squibs.*—U. S. Bur. Mines, Technical Paper No. 7; 1912; pp. 19; 10c. Abstract in Sci. & Art of Mng., May11, p. 469; 1800 w; 35c.

Hanson, C. B.—*Where Should the Primer Go?*—E. & M. J., May4,1912; 800 w; 25c.

Holland, C.—*Ueber Explosionserreger;* [The exciting of explosions].—Zts. f. Sprengstoffw., Apr.1,1912; p. 135; 1500 w; 35c.

Hosking, J., and P. E. Barber.—*Where Should the Primer Go?*—E. & M. J., Apr.27, 1912; p. 825; 1200 w; 25c.

Neuman, Egon.—*Fried. Krupps Uhrzünder;* [The Fried. Krupp time-clock exploder].—Zts. f. . . Sprengstoffwesen, Jan.1,1912; p. 1; Jan. 15, p. 25; 10,000 w*; 65c.

Philip, Rob. — *Knallquecksilberstudien;* [Studies on mercury fulminates].—Zts. f. Sprengstoffw., March15,1912; p. 110; April 1; p. 156; May1, p. 180; May15, p. 198; June1, p. 221; 13,000 w*; $1.45.

Semple, C. C.—*Where Should the Primer Go?*—E. & M. J., March9,1912; p. 441; 2000 w; 25c.

Snelling, W. O. and W. C. Cope.—*The Rate of Burning of Fuse as Influenced by Temperature and Pressure.*—U. S. Bureau of Mines, Technical Paper No. 6; 1912; 28 pp.; 10c.
Reprinted in Coal Trade Bull., Feb.15, 1912; p. 47-55; March1, pp. 51-55; 40c. Abstract in Engg. & Contractg., Feb.14, p. 175; 4200 w; 20c. Also in Mng. Sci., Feb. 15, p. 169; 1500 w; 20c. Also in E. & M. J., Apr.6, p. 689; 1200 w; 25c. Also in S. Afr. Mng. Jnl., Apr.13, p. 244; 1500 w; 35c. Also in Queensl. Gov't. Mng. Jnl., Apr., p. 164; 1500 w; 35c.
German translation in Zts. f. Schiess- & Sprengstoffw., July15, p. 285; Aug.1, Aug. 15; 95c.

Wille, R.—*Mechanische Zeitzünder;* [Mechanical time exploders].—Berlin, 1911; pp. 154*; $5. (book).

———. *Hope's "Honeycomb" Fuses.*—Iron & Coal Trades Rev., Jan.5,1912, p. 22; 1000 w*; 30c.

———. *Table for Cutting Fuse.*—E. & M. J., May11,1912; p. 933; 250 w*; 25c.

BLASTING AND SHOOTING

Dean, S.—*The Problem of Reducing Ventilation When Firing.*—Coal Age, May11, 1912; p. 1018; 750 w; 20c.

Dupuy, J.—*Mines de combustibles; réglement général du 13 Aout, 1911, Emploi des explosifs;* [Decree of Aug.13,1911, governing the use of explosives in coal mines in France].—Annales d. Mines, April,1912; p. 251; 4000 w; 75c.

Fuller, J. T.—*Cartridges for Tamping Dynamite.*—E. & M. J., June15.1912; p. 1175; 500 w; 25c.

Guest, J. B.—*Blasting and the Use of Explosives in Mines.*—Sci. & Art of Mng., Dec. 23,1911, p. 227; Jan.6,1912, p. 246; 2000 w; 50c.

Heys, W.—*Simultaneous Shot-Firing.*—Sci. & Art of Mng., May11,1912; p. 478; 1100 w; 35c.

Hogan, P.—*The Question of Reducing Ventilation When Firing.*—Coal Age, Apr. 6,1912; p. 849; 750 w; 20c.

Perkins, F. C.—*Sixteen Tons of High Explosive in a Blast.*—Mines & Minerals, Feb., 1912; p. 437; 1000 w*; 35c.

Rood, N.—*Cartridges for Tamping Dynamite.*—E. & M. J., May25,1912; p. 1021; 500 w; 20c.

Verner, J.—*Firing Shots in Still Air;* [Favors shutting down ventilation in shooting].—Coal Age, June1,1912; p. 1107; 1100 w; 20c.

Virgin, R. Z.—*Normal Ventilation at Firing Time;* [Opposes decrease in air current at shot firing].—Coal Age, March30,1912; p. 817; 750 w; 20c.

Wade, A. Y.—*The Question of Reducing Ventilation When Firing.*—Coal Age, Apr. 13,1912; p. 884; 1200 w; 20c.

Weston, E. M.—*Blasting in Wet Shafts.*—E. & M. J., June1,1912; p. 1077; 600 w; 25c.

Wilhelmi, A.—*Verfahren und Apparat zur Untersuchung der Nachschwaden von Explosivstoffen;* [Process and apparatus for determining the nature of after-gases in blasting explosives].—Zts. f. Sprengstoffw., March15,1912, p. 112; 1000 w*; 35c.

———. *A Blast Which Moved* 400,000 *Cubic Yards of Rock:* [Oregon Short Line Ry. tunnel, Snake River].—Engg. Record, Feb.24,1912; p. 206; 1200 w*; 25c.

———. *Big Blast at Steins, N. Mex.;* [77,600 lbs. of explosive to move 237,000 cu. yds. of rock in S. Pacific R. R. ballast quarries].—Mines & Minerals, Apr.,1912; p. 539; 1500 w*; 35c.

———. *Blownout and Windy Shots; Their Cause and Prevention.*—Coal Age, May18,1912; p. 1051; 400 w; 20c.

———. *British Home Office Instructions on Detonators.*—Sci. & Art of Mng., Dec.23, 1911, p. 233; 500 w; 35c.

———. *Cartridges for Tamping Dynamite.*—E. & M. J., May4,1912; p. 879; June 8, p. 1127; 1200 w*; 40c.

———. *Concerning Blasting;* [Discusses propagation of waves].—Engg. Record, Jan. 27,1912; p. 85; 750 w; 25c.

———. *Great Blast in Quarry at Tenino, Washington;* [Loosening 500,000 tons of sandstone].—Mining & Engg. World, March 30,1912; p. 719; 1000 w*; 10c. Also in Engg. & Contractg., May8, p. 514; 1000 w*; 20c.

———. *Small Tunnel Drilling and Blasting;* [1½ miles of 6x6 ft. tunnel in rock at Rochester, N. Y.; from "The Contractor"].—Compr. Air Mag., Apr.,1912; p. 6392; 1800 w: 35c.

———. *Les explosifs dans les mines de combustibles;* [New French decree on use of explosives in coal mines].—Métallurgie, March27,1912; p. 195; 1000 w; 35c.

———. *Shot Firing in Mines;* [Series of letters in open discussion].—Coal Age, March9,1912, p. 717; March16, p. 751; 1800 w; 30c.

ELECTRIC FIRING

Dobbelstein, O.—*Die Unfallgefahr bei der Schiessarbeit mit elektrischer Zündung und mit Zündschnurzündung;* [The liability to accident in electric vs. fuse blasting].—Glückauf, Apr.13,1912; p. 594; 1200 w; tables; 45c.

Dupuy, J.—*Emploi dans les mines grisouteuses de divers types d'exploseurs électriques;* [Decree of Feb. 23,1912, governing the use of electrical exploders in French coal mines; with descriptions of permitted types].—Annales d. Mines, April,1912; p. 213-227*; 75c.

Humann, P.—*Ueber das elektrische Schiessen;* [Electric firing and regulations in the Clausthal district, Germany].—Kali, May15,1912; p. 221; 3500 w*; 45c.

Janzen, —. *Tragbarer Schiessschalter mit Wasserdichtem Gehäuse;* [Portable electric shot firer in water-proof casing].—Kali, March1,1912; p. 104; 1200 w*; 45c.

Kopplin, —. *Gefährdung der Schiessarbeit mit elektrischer Zündung durch den elektrischen Grubenlokomotivbetrieb;* [Dangers of electric blasting in mines using electric haulage].—Glückauf, May25,1912; p. 821-824*; 50c.

Lisse, —. *Elektrische Zündung beim Schachtabteufen;* [Electric blasting in shaft sinking].—Glückauf, May11,1912; p. 748; 1800 w*; 50c.

Scott, E. K.—*Electricity in Connection with Explosives;* [In manufacturing and firing; read to Asso. of Mng. Electr. Engrs.; abstract].—Iron & Coal Trades Rev., Nov.3, 1911, p. 736; 6000 w*; 30c; (Discussion), Jan.26,1912, p. 132; 3000 w; 30c.

SAFE HANDLING AND USING

De Blois, W. H.—*A Simple Dynamite Thawer;* [By electrically heated water].—Canadian Mng. Jnl., June1,1912; p. 379; 500 w*; 25c.

Brealey, W. H.—*Dangers of Shot Firing on a Roadway Along Which Large Quantities of Air are Passing.*—Sci. & Art of Mng., Jan.6,1912, p. 261; 750 w; 35c.

Denison, P. N.—*Accidents from Dynamite;* [and their prevention].—Rock Products, Apr.,22,1912; p. 36; 750 w; 30c.

Hansen, N. L.—*Ueber die Feuchtigkeitsverhältnisse des Schiesswollpulvers;* [The effect of dampness on nitrocellulose explosives].—Zts. f. . . Sprengstoffwesen, Dec. 15, p. 461; 1200 w; 35c.

Hocking, J.—*On the Careless Use of Powder.*—E. & M. J., June15,1912; p. 1165; 500 w; 25c.

Hurter, C. S.—*Accidents in the Transport and Use of Explosives;* [Read to Lake Superior Mng. Inst.; abstract].—Mining & Engg. World, Sept.30,1911; p. 627; 3100 w; 10c.

German abstract in Zts. f. Sprengstoffwesen, March1,1912; p. 93; 3200 w; 35c.

Nelson, A.—*Precautions Before and After Firing a Shot in Sinking a Pit.*—Sci. & Art of Mng., May11,1912; p. 474; 600 w; 35c.

Rice, C. T.—*Powder House with Concrete Roof.*—E. & M. J., March9,1912, p. 490; 200 w*; 25c.

Watteyne, V. and Em. Lemaire.—*Le bourrage extérieur en poussières incombustibles;* [External tamping with stone dusts to allay the danger of firedamp or coaldust explosions].—Annales d. Mines, Vol. 16, No. 4; 1911; pp. 937-998*; tables; 90c.

Abstract in English, Coll'y Guardn., Nov. 3,1911, p. 873, p. 879; 2000 w; 30c. Also in Coal & Coke Op., Nov.23, p. 321; 1200 w; 25c.

Abstract in German in Zts. f. . . Sprengstoffwesen, Jan.15,1912; p. 21; Feb. 1, Feb. 15, p. 72; 80c.

Spanish abtsract in Rev. Minera, Apr.8, p. 166; 3000 w; 35c.

———. *An Unconsidered Shot-Firing Risk;* [Discusses fatal inhalation of fumes].—Iron & Coal Trades Rev., Feb.2,1912, p. 182; 1500 w; 30c.

———. *Berg- und Hütten-Kalendar für das Jahr,* 1912; [Miners' Pocket Manual for 1912; includes chapters on explosives and their handling in Germany; Huyssen's, Vol. 57].—Essen, 1912, pp. —; $2; (book).

———. *"Don'ts" Governing Handling of Explosives in Mines;* [Rules of Oliver Iron Mng. Co.].—Mining & Engg. World, Apr.27, 1912; p. 914; 500 w; 10c.

———. *Portable Magazines for the Storage of Explosives; Methods of Thawing Dynamite.*—Engg. & Contractg., Feb.21, 1912; p. 206; 750 w*; 20c.

MISCELLANEOUS

Anderson, A. E.—*Recent Developments in Explosives;* [Lecture at Telluride, Colo.; Dec.,1911].—E. & M. J., Feb.3,1912; p. 270; 6000 w; 25c. Also in Coal Trade Bull., March15,1912; p. 53; 5500 w; 25c. Also in Mex. Mng. Jnl., May, p. 29; 5500 w; 25c. Also in Colo. School of Mines Mag.,

May,1912; p. 171; 6000 w; 50c. Also in Mng. Sci., June20, p. 531; 2500 w; 20c.

Berkhout, J. D.—*Quecksilberbestimmung in rauchschwachem Pulver;* [Mercury determination in smokeless powder].—Zts. f. . . Sprengstoffwesen, Feb.15,1912; p. 67; 1000 w; 35c.

Brame, J. S. S.—*Constant Temperature Heating Apparatus for Explosives and Experiments on the Decomposition of Nitrocelluloses.*—Soc. of Chemi. Ind'y, Jnl; Feb.29, 1912; p. 159; 2800 w*; 45c.

German translation in Zts. f. Sprengstoffw., June,1912; p. 216; 2400 w*; 45c.

Bravetta, E.—*Die deutsche Explosivstoffindustrie auf der Weltausstellung zu Turin,* 1911; [The German explosives industry at the Turin exposition, 1911].—Zts. f. Sprengstoffwesen, Dec.1,1911, p. 453; 8000 w; 45c.

Comey, A. M.—*Certain Phases of Technical Chemical Research;* [Research organization of Du Pont Powder Co.].—Met. & Chemi. Engg., March,1912, p. 141; 2700 w; 35c.

Davies, H.—*Explosives and Shot-Firing in Coal Mining.*—Cardiff, 1912; pp. —; 75c; (book).

Finch, Geo.—*Die massanalytische Bestimmung von Schwefel-, Salpeter-, und Salpetrigsäure in Misch- und Abfallsäuren;* [Quantitative estimation of sulphuric, nitric and nitrous acids in mixtures and wastes].—Zts. f. Sprengstoffw., March15, 1912; p. 113; 2000 w; 35c.

Gilbert, G. H.; L. I. Wightman, and W. L. Saunders.—*The Subways and Tunnels of New York; Methods and Costs.*—New York; 1912; 372 pp*; $4; (book).

Göpner, C.—*Die Herstellung des Nitroglyzerins;* [The manufacture of nitroglycerine].—Chem. Industrie, Jan.1,1912; pp. 8-15*; 50c.

Hall, Cl.—*Apparatus and Methods for Physical Tests of Explosives.*—U. S. Bur. Mines, Bull. No. 15; 1912; pp. 78-117*; 10c.

Hennig, R.—*Alfred Noble;* [Biographic sketch].—Stuttgart, 1912; 51 pp; 12 figs; 75c (book).

Hofwimmer, F.—*Ein Beitrag zur Beurteilung des Dynamitglycerins;* [Note on valuation of dynamite glycerine].—Chemiker Ztg., Jan.11,1912, p. 41; 1000 w*; 30c.

Low, V. F. S.—*Impressions Gathered While Travelling;* [Nobel works, Ardeer, Scotland].—Australian Mng. Standd., Feb. 1,1912; p. 97; 1000 w*; 35c.

Lunge and Berl, etc.—*Testing Methods in the Chemical Industries* (in German).—See under Chemistry.

MacDonald, Geo. W.—*Historical Papers on Modern Explosives, with an Introduction* by Sir Andrew Noble.—London, 1912; pp. —; $2.50; (book).

Morris, F.—*A History of the E. I. Du Pont Powder Co.*—Banker & Investor Mag., Jan.,1912; p. 609; Feb., p. 685-695, March, p. 757-772; April, pp. 907-922*; May, pp. —; $1.50.

Munroe, Chas. E.—*Some Modern Developments in Methods of Testing Explosives.*—Smithsonian Instn., Annual Rep. f. 1910; 1911; pp. 291-307*; $1.00.

Pozzi-Escot, E.—*Explosions et explosifs; phénomènes d'explosion;* [Explosions and explosives; the phenomena of explosions—chemical and biologic].—Paris, 1912; pp. —; $35 (book).

Quinan, W. R.—*High Explosives.*—Melbourne, Australia; 1912; 250 pp*; $6.50.

Rodman, J. C.—*Substitute Methods for Dispensing with Shot-Firing in Mines;* [Various wedges, and lime cartridges].—Sci. & Art of Mng., Jan.20,1912, p. 279; 1500 w*; 35c.

Rzehulka, A.—*Zur Kenntnis der Sprengstoffe;* [Constitution of the explosives used in mining].—Montanist. Rundschau, Nov. 15,1911, p. 1056; Dec.1, p. —; Dec.16, p. 1154; 12,000 w; $1.00.

Saunders, W. L.—*Current Practice in Drilling, Blasting and Dredging Rock under Water;* [Read to 12th Internatnl. Congr. of Navigation].—Engg. & Contractg., Apr.24, 1912; p. 463; 5000 w; 20c.

Schmidt, G., and C. Göpner.—*Anlage von Nitroglycerinfabriken;* [Controversy on proper plant equipment for nitroglycerine works].—Chem. Industrie, March1,1912; p. 139; 1800 w; 50c.

Simoes, J. M. de Oliveria.—*Curso elementar sobre substancias explosivas, Vol. II;* [Elementary course on the manufacture and properties of explosives; Vol. II: Explosives, properly so-called].—Lisbon, Portugal; 1911; pp. —; (book).

Snelling, W. O., and C. G. Storm.—*The Behavior of Nitroglycerine When Heated.*—U. S. Bur. Mines, Technical Paper No. 12; 1912; 14 pp.; 20c.

Snelling, W. O.—*Nature and Composition of Explosives.*—U. S. Bur. Mines, Bull. 15, 1912; pp. 7-15; 10c. Abstract in Mng. Sci., Feb.29,1912; p. 208; 2800 w; 20c.

Snelling, W. O.—*Thermo-Chemistry of Explosives.*—U. S. Bur. Mines, Bull. No. 15, 1912; p. 16-62; 10c.

Verola, —. *Ueber die Zersetsung von Trinitrotoluol unter dem Einfluss von Wärme;* [Decomposition of trinitrotoluol under the influence of heat; translated from Mem. d. Poudres].—Zts. f. Sprengstoffw., June1,1912; p. 213; 3000 w*; 45c.

Vieille, P.—*Einwirkung nitroser Gase auf die Pulver B;* [Effect of nitrous gases on B-powder; from Mém. d. Poudres, Vol. 15]. —Zts. f. . . Sprengstoffwesen, Dec.1,1911, p. 441; Dec.15, p. 464; 7000 w; 50c.

Williams,W.—*Under What Circumstances is a High Explosive Preferable to Ordinary Gunpowder?*—Sci. & Art of Mng., May25, 1912; p. 496; 500 w; 35c.

British Home Office.—*Authorized Explosives;* [For manufacture in, or import into, the U. K.].—Iron & Coal Trades Rev., Jan. 26, 1912, p. 140; 1800 w; 30c.

British Home Office.—*Explosives in Coal Mines Order.*—Mng. Engg., July,1912; p. 97, p. 104; 4000 w; 35c. Also in Sci. & Art. of Mng., July6, p. 558; 2100 w; 35c.

———. *Bureau of Mines Tests of Explosives; Conditions under which Explosives are Tested.*—U. S. Bur. Mines, Bull. No. 15, 1912; p. 191; 1500 w; 10c.

———. *Manufacture of Explosives;* [In U. S. in 1909; brief summary of Census report].—Mines & Minerals, March,1912, p. 482; 100 w; table; 35c.

———. *Mining Explosives in Britain;* [Table of consumption of various brands in 1910; from official report].—Mining & Engg. World, Dec.23,1911, p. 1270; 300 w; table; 10c.

———. *Zur Frage der Zulassung neuer Sprengmittel in Oesterreich;* [Introduction of new explosives in Austria and objection against the imperial monopoly].—Montanist. Rundschau, March16,1912; p. 254; 1500 w; 45c.

Sinking and Driving: Shafts, Tunnels, Stoping, Drifts, Chambers, etc.

SHAFTS AND SHAFT SINKING

Allen, C. A.—*Miscellaneous Notes on Shafts and Shaft-Sinking;* [Various shaft equipments and deep records].—Colo. School of Mines Mag., June,1912; p. 204; 1500 w; 65c.

Boericke, W. F.—*Shaft-Sinking Costs in Wisconsin* [Zinc district].—E. & M. J., May 11,1912; p. 938 500 w; 25c.

Cartlidge, O.—*Mine No. 3, Saline County Coal Co.;* [Includes description of fireproof shaft construction].—Mines & Minerals, Feb.,1912; p. 387; 2000 w*; 35c.

Cartlidge, O.—*Track Arrangement for Shaft Bottoms.*—Mines & Minerals, Jan., 1912; p. 336; 1200 w*; 35c.

Gaskell, T.—*Precautions in Fixing a Walling Crib or Curb in Bad Ground.*—Sci. & Art of Mng., May25,1912; p. 497; 750 w*; 35c.

Goodney, S. J.—*Raising Shaft on Timber in Hard Rock at the Armenia Mine.*—Lake Superior Mining Inst., Proc., 1911; pp. 171-176*.

Abstract in Engg. & Contractg., Jan.17, 1912; p. 67; 1000 w*; 25c. Also in Mines & Minerals, March, p. 495; 1000 w*; 35c.

Gullachsen, B. C.—*Sinking Operations at the Norma Shaft, Kattowitz, Silesia.*—Chem. Met. & Mng. Soc. of S. Afr., Jnl., Aug.,1911, p. 43; 3000 w*; (discussion), Nov., p. 129; Dec., p. 229; 1800 w; $1.60.

d'Haenens, —. *Plancher mobile;* [Movable platform or scaffold used in inserting shaft casing at La Louvière & Sars-Longchamps shaft No. 9, Belgium].—Annales d. Mines (Belgiq.), Vol. 17, No. 2; 1912; p. 421; 500 w*; 95c.

Heriot, E. M.—*The Shape of a Shaft;* [Rectangular vs. oval or circular; from Engg. & Mng. Jnl.].—S. Afr. Mng. Jnl., Jan.27,1912; p. 759; 2000 w; 35c.

Heys, W.—*Ventilation in Sinking Two Shafts 1500 Ft. Deep, Close Together.*—Sci. & Art of Mng., Apr.27,1912; p. 454; 750 w*; 35c.

Homann, Labes, and others.—*Handbuch für Eisenbetonbau, Band VII;* [Manual of Reinforced Concrete Engineering; Vol. VII, Railroads, Tunnels and Mining; Chapter VII, by B. Nast: Concrete and reinforced concrete in shafts, roadways, workings, and above ground].—Berlin, 1912; (2d edition); pp. —; 1093 figs.; $8; (book).

Johnson, R. C.—*Shafts for American Coal Mines.*—Mines & Minerals, Jan.,1912; p. 344; 3800 w*; 35c.

Johnson, R. C.—*Shaft and Slope Construction, 201 Mine;* [Clinchfield, Va.].—Coal Age, May4,1912; p. 970; 2500 w*; 20c.

Jones, E. R.—*Methods of Constructing and Placing Reinforced Concrete Sets in Sinking Shafts for the Ahmeek Mining Co., Michigan;* [Read to Michigan College of Mines Club, Houghton; 1912].—Mining & Engg. World, May25,1912; p. 1093; 2600 w; 10c. Also in Engg. & Contractg., May 22,1912; p. 570; 1200 w; 20c. Also in Mng. Sci., May23, p. 453; 2600 w; 20c. Also in Mines & Methods, June,1912; p. 504; 2100 w; 25c. Also in E. & M. J., July13, p. 59; 1600 w*; 25c.

Key, A. Cooper.—*Record Sinking at State Mines, Witwatersrand;* [Southeast shaft, Modderfontein].—Mining & Engg. World, Junel,1912; p. 1145; 2000 w; 10c. Also described in E. & M. J., Junel, p. 1073; 1100 w; 25c. Also in M. & S. P., June8, p. 790; 1800 w; 20c. Also in Engg. & Contractg., Junel2, p. 657; 1500 w; 20c.

Kirkham, Wm.—*Sinking Staple Pits;* Raising a winze].—Art & Sci. of Mng., Jan. 20,1912, p. 270; 1000 w*; 35c.

Lisse, —. *Elektrische Zündung beim Schachtabteufen;* [Electric blasting in shaft sinking].—Glückauf, May11,1912; p. 748; 1800 w*; 50c.

McCormac, T.—*Shaft Sinking Costs at Pioche, Nevada.*—M. & S. P., May4,1912; p. 632; 800 w; 20c.

McDonald, P. B.—*The Rogers Concrete Drop-Shaft, Iron River, Mich.*—M. & S. P., Dec.30,1911, p. 831; 1800 w*; 20c. Abstract in Compr. Air Mag., March, p. 6360; 1200 w*; 20c.

Meuskens, C.—*Verfahren zur Nutzbarmachung des Eisenbetons zum Ausbau von Schächten in druckhaftem Gebirge;* [Use of reinforced concrete in shafts subjected to heavy pressures].—Braunkohle, Feb.16, pp. 725-732*; Feb.23, pp. 741-746*; March 8, pp. 773-779*; $1. Abstract in Techn. Blätter, May11, p. 148; 1000 w; 35c. Also in Kali, Junel, p. 277; 500 w; 45c.

Nelson, A.—*Precautions Before and After Firing a Shot in Sinking a Pit.*—Sci. & Art of Mng., May11,1912; p. 474; 600 w; 35c.

Nicol, J. M.—*Vertical vs. Inclined Shafts in Precious Metal Mining.*—Mex. Instn. of Mng. & Met'l'gy, Trans; Vol. 2, No. 6, 1912; p. 250; 3500 w; 75c.

Abstract in Mining & Engg. World, March30, p. 701; 3000 w; 10c. Also in Canadian Mng. Jnl., Apr.15, p. 281; 3500 w; 25c. Also in W. Australian Mng., etc., Jnl., May25, p. 7; 2500 w; 45c.

Redmayne, R. A. S.—*Ventilation in Sinking Shafts;* [From British report on mines for 1910].—Coal Age, Feb.10,1912; p. 579; 750 w; 20c.

Rice, C. T.—*Combination of Post and Set Timbering in Shafts;* [Inclined shafts of Michigan copper belt].—E. & M. J., Feb.10, 1912; p. 302; 1500 w*; 25c.

Ropes, L. S.—*Vertical vs. Inclined Shafts.*—E. & M. J., June8,1912; p. 1119; 1000 w; 25c.

Saelier, L.—*Shaft Bottom at the Arenberg Mine;* [From Rev. Univers. d. Mines, Aug., 1904].—Mines & Minerals, Feb.,1912; p. 413; 750 w*; 35c.

Weston, E. M.—*Blasting in Wet Shafts.*—E. & M. J., Junel,1912; p. 1077; 600 w; 25c.

White, L.—*Methods of Shaft Excavation in Earth at the Rondout Pressure Tunnel of the Catskill Aqueduct;* [read to Soc. of Municipal Engrs. of N. Y.].—Engg. & Contractg., May8,1912; p. 516; May15, p. 543; 4000 w*; 30c.

Wilson, P.—*Signalling in Sinking Shafts and in Winding Shafts.*—Sci. & Art of Mng., Apr.27,1912; p. 449; 500 w*; 35c.

Woodson, E. F.—*Method of Shaft Plumbing.*—Mines & Minerals, May,1912; p. 594; 500 w*; 35c.

"Ajax."—*Circular vs. Rectangular Shafts; Defense of the Circular Shaft.*—S. Afr. Mng. Jnl., Feb.17,1912; p. 871; 800 w; 35c.

"Colliery Surveyor."—*Measurement of Depth of Vertical and Inclined Shafts.*—Sci. & Art of Mng., May25,1912; p. 491; 750 w*; 35c.

M. H. C.—*Circular vs. Rectangular Shafts;* [Favors rectangular].—S. Afr. Mng. Jnl., Feb.10,1912; p. 839; 1600 w; 35c.

———. *Circular and Rectangular Shafts;*

Which Type is Preferable?—Mng. World (London), Jan.27,1912; p. 97; 1000 w*; 35c.

———. *Deep Coal Mine Shafts, and Deep Drill Holes.*—Mines & Minerals, May, 1912; p. 598; 600 w; table; 35c.

———. *Electric Sinking Hoist at Cinderella Deep Consol. Mine.*—S. Afr. Engg., Dec.,1911, p. 103; 1000 w*; 35c. Also in E. & M. J., Jan.27,1912; p. 205; 1000 w; 25c. Also in Mines & Minerals, May, p. 624; 1000 w; 35c. Also in Mex. Mng. Jnl., June, p. 42; 1000 w; 25c.

———. *Les fonçages de puits dans la Campine;* [Shaft-sinking at the Coursel colliery in La Campine].—Soc. Amicale.. Mineurs de Douai, Bull. Dec.10,1911, p. 788; 1000 w; 35c.

———. *Shaft Sinking Progress on the Far East Rand.*—S. Afr. Mng. Jnl., May 11,1912; p. 381; 1200 w; 35c.

———. *Sinking an Open Well with a Clam-Shell Bucket.*—Engg. Record, Feb.3, 1912; p. 124; 500 w*; 20c.

———. *Testing the Bearing Capacity of Earth in Excavations.*—Engg. Record, May 25, 1912; p. 584; 1000 w*; 25c.

———. *Versuche und Verbesserungen beim Bergwerksbetriebe,* 1911; [Innovations and improvements in mining practice in Prussia in 1911; shaft sinking].—Zts. f. d. Berg-, H-, & Salinenw., Vol. 60, No. 1; 1912; pp. 83-89*; $1.50.

———. *Versuche und Verbesserungen beim Bergwerksbetriebe,* 1911; [Innovations and improvements in mining practice in Prussia in 1911; shaft support].—Zts. f. d. Berg-, H-, & Salinenw., Vol. 60, No. 1; 1912; pp. 95-97*; $1.50.

CEMENTATION PROCESS

Achschunow, N.—*Ueber die Erhärtung des Zementschlammes (Tamponages Zement);* [The hardening of injection cements in shaft sinking and drilling].—Organ d...Bohrtechniker, March1,1912, p. 58; 1000 w; 45c.

Baumstark, —. *Schachtausbau und Versteinerungsverfahren;* [Schlüter system of cement injection in shaft sinking at the Alma colliery, Gelsenkirchen; read to Deu. Beton Ver.].—Ton-Industrie Ztg., Apr.27, 1912; p. 709; 1500 w*; 35c. Also in Deu. Beton Ver., Verhandl. f. Feb.,1912.

Bruchausen, —. *Schachtabteufen nach dem Versteinerungsverfahren;* [Shaft-sinking by the cement injection process].—Kohle & Erz., March18,1912; p. 266; 2100 w*; 35c. Also in Organ d. Bohrtechniker, May1, p. 103; 1500 w; 35c.

Ebeling, Dr.—*Neue Erfolge auf dem Gebiete der Zementierverfahrens;* [Newer developments in the cementation process].—Oberschles. Berg- & Hüttenm. Ver., Zts.; March,1912; p. 97; 1800 w; 45c.

Heym, —. *Schachtabsteifung durch Zementführung;* [Shaft supporting by cement injection].—Kali Erz u. Kohle, Jan.5,1912, p. 13; 1500 w; 35c.

Johnson, R. C.—*Use of Grout in Shaft Sinking;* [Cement injection].—Coal Age, Feb.24,1912; p. 639; March2, p. 674; 4000 w*; 30c. Abstract in Compr. Air Mag., April,1912; p. 6384; 2800 w*; 25c.

Lodwick, G. S.—*Injection Process for Sinking Shafts.*—Iowa Engr., Jan.,1912; p. 117; 1600 w*; 35c.

Schreiber, H. V.—*Method and Cost of Solidifying Fissured Rock by Grouting; Estacada Dam, Oregon;* [Read to Natnl. Asso. of Cement Users; abstract].—Engg. & Contractg., May8,1912; p. 517; 1200 w; 20c.

Shrager, A. L.—*Shaft Sinking Against Water in Fissured Ground by Cement Injection;* [Read to Instn. of Mng. & Met'l'gy; abstract].—Mines & Minerals, March,1912, p. 502; 2000 w*; 35c.

FREEZING PROCESS

Dehasse, —. *Charbonnage d'Hautrage: Continuation du creusement des puits;* [Shaft sinking by the congelation process at Hautrage and Hensies-Pommerœul colliery, Belgium].—Annales d. Mines (Belgiq.), Vol.17, No. 2, 1912; p. 389-401; 95c.

Laur, F.—*Le progrès dans le creusement des puits par congélation;* [Progress in shaft sinking by freezing].—Echo d. Mines, Dec.21,1911, p. 1322; 1200 w; 35c.

Stegemann, Prof.—*Leistungen und Kosten beim Schachtabteufen nach dem Gefrierverfahren;* [Efficiency and costs in shaft sinking by the congelation process].—Glückauf, March16,1912; pp. 417-424; 50c. French translation in Annales d. Mines (Belgiq.), Vol. 17, No. 2; 1912; p. 541-560; 95c.

Wilson, Wm. B.—*The Advantages of Freezing as a Method of Sinking Through Heavily Watered or Difficult Ground;* [Read to N. of Engl. Inst. of Mng. & Mechl. Engrs.; abstract].—Coll'y Guardn., June 16,1911, p. 1205; 2700 w; 30c. Also in Iron & Coal Trades Rev., June16, p. 1003; 2700 w; 30c. Also in Mng. Engg., Aug., 1911, p. 154; 2000 w; 35c. Also in Australian Mng. Standd., July27, p. 84; 2100 w; 35c.

Discussion of paper before the society, in Iron & Coal Trades Rev., Oct.20,1911, p. 652; Feb.16,1912, p. 251; 4500 w; 50c. Also in Coll'y Guardn., Oct.20, p. 765; Feb. 16, p. 323; 4500 w; 50c.

E. G.—*Der Stand der Gefrier- und Zementschachtabteufen in der belgischen Campine am 1 Jänner,* 1912; [Status of the freezing and cementing processes of shaft-sinking in the Campine basin, Belgium, Jan. 1,1912].—Organ d. Bohrtechniker, May 1,1912; p. 104; 1000 w; 35c.

WATER AND LOOSE SANDS
(PROBLEM IN GENERAL)

Curtis, B.—*Replacing a Corroded Water Ring in an Old Shaft.*—Sci & Art of Mng., Dec.23,1911, p. 239; 600 w*; 35c.

Diancourt, —. *Schwierigkeiten beim Schachtabteufen;* [The difficulties of shaft sinking in the thick water-bearing sands and shattered gypsum beds in northwest Germany].—Bergbau, Apr.25,1912; p. 237; 4000 w; 35c.

Eddy, L. H.—*Caving of the Bunker Hill Shaft, Cal.*—E. & M. J., Feb. 24, 1912; p. 402; 1200 w; 25c.

Franklin, J. S.—*Some Interesting Cases of Shaft Sinking.*—Cassier's Mag., Feb., 1912; pp. 122-131*; 35c. Abstract in Mining & Engg. World, March2, p. 508; 3500 w; 10c.

Herwegen, Leo.—*Das Schwimmsandproblem und seine Anwendung auf verschiedene Abteufmethoden in schwimmendem Gebirge;* [The quicksand problem and its treatment in various processes of shaft sinking].—Aachen Kgl. Techn. Hochschule, Dissert, 1911; pp. —; $1; (Thesis).

Hutchinson, F.—*Handling Large Quantities of Water in Shaft Sinking.*—Sci. & Art of Mng., March16,1912; p. 384; 1000 w*; 35c.

Lewis, C. B.—*Detailed Methods Employed in Sinking and Converting Caisson Founda-*

tions in Chicago.—Engg. & Contractg., Jan. 10,1912; p. 33; 3500 w*; 25c.

Nelson, A.—*Fixing of Cast-Iron Tubbing in Shafts; and Comparative Merits of Separate Pumping Shafts.*—Sci. & Art of Mng., March2,1912, p. 354; 1000 w*; 35c.

Simpson, C.—*Sinking in Loose Ground by Sheet Piling.*—Sci. & Art of Mng., Jan. 6,1912, p. 256; 1200 w*; 35c.

Springer, J. F.—*Sealing Off Water in Catskill Aqueduct Shafts.*—E. & M. J., March9,1912, p. 512; 1200 w; 25c.

Wittich, L. L.—*Draining a Shaft Through a Drill Hole;* [Joplin, Mo.].—E. & M. J., March9,1912; p. 491; 500 w; 25c.

"Brychan."—*Notes from Wales: Dealing With Water During Sinking.*—Sci. & Art of Mng., Dec.23,1911, p. 217; 750 w; 35c.

———. *Steel Sheet Piling for Sinking Colliery Shafts;* [at Hatfield Main colliery near Doncaster].—Coll'y Guardn., Apr.12, 1912; p. 734; 1000 w*; 35c.

———. *Water-Tight Shaft Lining.*—Coal Age, March30,1912; p. 813; 500 w; 20c.

TUNNELS AND TUNNELING

Artingstall, Wm.—*Grouting Leaks in the Washington St. Tunnel under the Chicago River;* [Read to Westn. Soc. of Engrs.; abstract].—Engg. News, Jan.11,1912; p. 63; 500 w; 25c.

Bader, —. *Vortrieb und Ausbolzung von Gebirgstunneln;* [Manual of Tunnel-Driving and Equipping for Mines].—Berlin, 1911; 79 pp.; 40 figures; $1.00 (book).

Bennett, B. W.—*Ventilating Equipment of the Pennsylvania Tunnels at New York.*—Engg. Record, June8,1912; p. 626; 1200 w*; 25c.

Brunton, D. W.—*Notes on the Laramie Tunnel.*—Amer. Inst. Mng. Engrs., Bull. 64, Apr.1912; pp. 357-376*; $1.15.

Discussion by W. L. Saunders and H. F. Bain, Bull. 66, June, pp. 659-665.

Abstract of paper in Mining & Engg. World, May4, p. 959; 3200 w*; 10c. 1912; p. 432; May1, p. 488; May8, p. 514; 10,000 w*; 40c.

Copperthwaite, W. C.—*Tunnel Shields and the Use of Compressed Air in Subaqueous Work.*—London, 1912 (2d edition); pp. —; 260 figs; $9 (book).

Coy, B. G.—*Methods and Progress Records of Driving the Laramie-Poudre Tunnel;* [Greeley, Colo., irrigation project; abstract from Amer. Soc. of Civil Engrs., Proc., Vol. 38, p. 217].—Engg. & Contractg., Apr.10,1912; p. 405; 5000 w*; 20c.

DeHart, W. H.—*The Northwestern Railway Tunnel near Sparta, Wis.;* [From the "North Western"].—Engg. Record, Apr.27, 1912; p. 461; 500 w; 20c.

Gavin, W. H.—*Arthur's Pass Tunnell, New Zealand.*—Engg. News, May9,1912; p. 870; 5500 w*; 25c.

Gilbert, G. H.; L. I. Wightman; and W. L. Saunders.—*The Subways and Tunnels of New York; Methods and Costs.*—New York; 1912; 372 pp*; $4; (book).

Graham, E. M.—*Driving the New Kingwood R. R. Tunnel at the Allegheny Summit;* [Double track bore on B. & O. R. R. 4211 ft. in 13 months].—Engg. Record, Feb. 10,1912; p. 144; 2700 w*; 20c.

Hollingsworth, C. H.—*Methods and Costs of Constructing Two Rock Tunnels Under the Erie Canal for the Buffalo Water Works, N. Y.*—Engg. & Contractg., Apr.17, 1912; p. 432; Apr.24, p. —; 10,000 w*; 30c.

Homann, Labes, and others.—*Handbuch für Eisenbetonbeau, Band VII;* [Manual of Reinforced Concrete Engineering; Vol. VII, Railroads, Tunnels and Mining; Chapter V, by A. Nowak, on Tunnels, Tunnel Ventilation and Protective Galleries].—Berlin, 1912; (2d edition); pp. —; 1093 figs.; $8; (book).

Hulsart, C. R.—*A Test of Watertightness of Concrete Tunnel Lining under High Head;* [Wallkill pressure tunnel of Catskill aqueduct, N. Y.].—Engg. News, Dec. 14,1911, p. 710; 3000 w*; 25c.

Johnson, R. C.—*Shaft and Slope Construction, 201 Mine;* [Clinchfield, Va.].—Coal Age, May4,1912; p. 970; 2500 w*; 20c.

Kemp, J. F.—*Geological Problems Presented by the Catskill Aqueduct of the City of New York.*—Canadian Mng. Inst., Jnl., No. 16, Oct.,1911, pp. 3-11; $1.20.

J. P. Kearns Tunnelling Co.—*Tunnel Driving by Modern Methods;* [New Kearns tunnelling machine].—Black Diamond, June 15,1912; p. 22; 250 w*; 30c.

Lauchli, E.—*Determination of Probable Rock Temperature in a Continental Divide Tunnel;* [Deeply overlaid 6-mile tunnel under continental divide, Colorado].—Engg. Record, June8,1912; pp. 619-622; 4000 w*; 25c.

McKay, Gury R.—*Lining a Tunnel in Swelling Rock;* [Snake Creek tunnel, Park City district, Utah].—Engg. Record, May 25,1912; p. 564; 2700 w*; 20c.

Noble, F. C.—*Notes on the Survey of a Subaqueous Tunnel;* [N. Y. to Brooklyn; from Amer. Soc. of Civ. Engrs., Proc. f. Dec., 1911, p. 1301; abstract].—Engg. Record, Jan.6,1912; p. 14; 3500 w*; 20c. Also in Engg. & Contractg., Jan.17, p. 65; 3000 w*; 25c. Also in Engg. News, Apr.11, p. 682; 4000 w*; 25c.

Mulholland, Wm.—*Notes on Driving the Elizabeth Lake Tunnel;* [Los Angeles aqueduct].—Engg. Record, Jan.20,1912; p. 72; 1100 w; 20c.

Saunders, W. L.—*Comparison of Speed of Drilling the Laramie-Poudre Tunnel with Recent European Tunnel Records.*—Engg. & Contractg., June5,1912; p. 630; 3200 w; 20c.

Schaar, R.—*Zum Bauunfall des Spreetunnels zu Berlin am 27 März,* 1912; [The accident to the tunnel under the Spree river, Berlin, March27,1912; from Technische Rundschau].—Organ d. Bohrtechniker, May 15,1912; p. 115; 3000 w*; 35c.

von Willmann, E.—*Ueber einige Gebirgsdruckerscheinungen in ihren Beziehungen zum Tunnelbau;* [Some rock-pressure phenomena in their bearing on tunnelling].—Darmstadt Techn. Hochschule Dissert., 1911; pp. —; $1 (Thesis).

Wittstein, H. L.—*Grouting the Concrete Lining of the Rondout Pressure Tunnel;* [Catskill aqueduct, N. Y.].—Engg. Record, Dec.30,1911, p. 772; 3600 w*; 25c.

Ziesemer, H. W. K.—*Tunnelbauten in Beton und Eisenbeton;* [Tunnel construction in concrete and reinforced concrete].—Ton-Industrie Ztg., May4,1912; p. 749; 2000 w*; 35c.

Zipser, M. E.—*Tunnel Lining, Catskill Aqueduct.*—Engg. News, May2,1912; p. 820; 12,000 w*; 25c. Abstract in Engg. Mag., July, p. 596; 2000 w*; 30c.

———. *A Small Drainage Tunnel in Rock;* [at College of City of N. Y.].—Engg. Record, March2,1912; p. 243; 1400 w; 20c.

———. *Bonus System on Los Angeles Aqueduct;* [Computation of bonus footings and earnings; tunneling methods].—Mines & Minerals, June,1912; p. 679; 1500 w*;

35c. Abstract in Engg. & Contractg., June 12, p. 659; 1000 w; 20c.

———. *Compressed-Air Grouting Machine for Grouting Tunnel Lining;* [Wallkill tunnel, Catskill aqueduct].—Engg. & Contractg., March6,1912; p. 265; 500 w*; 20c.

———. *Der Hamburger Elbtunnel;* [The tunnel under the Elb river at Hamburg].—Organ d. Bohrtechniker, Apr.1,1912; p. 79; 1600 w*; 45c.

———. *Driving the Big Savage Railroad Tunnel with Compressed Air* [near Cumberland, Md.].—Engg. Record, Dec.23, 1911, p. 728; 2500 w*; 25c. Abstract in Compr. Air Mag., Feb.,1912, p. 6324; 2200

———. *Interurban Railway Tunnel Through the Berkeley Hills, Mass.*—Eng.. Record, June8,1912; p. 641; 1000 w*; 25c. w*; 20c.

———. *Methods of Constructing the Rondout Pressure Tunnel of the Catskill Aqueduct.*—Engg. & Contractg., May22, 1912; p. 572; 4000 w*; 20c.

———. *Methods of Constructing the Beacon Hill Rapid Transit Tunnel, Boston, Mass.*—Engg. & Contractg., May22,1912; p. 571; 1500 w*; 20c.

———. *Panther Creek Drainage Tunnel;* [Lehigh mines from Coalport near Mauch Chunk to Nesquehoning, Shaft No. 2; Penn.].—Mines & Minerals, May,1912; p. 599-601*; 1000 w; 35c.

———. *Reinforced Concrete in a Tunnel;* [at Park City, Utah].—E. & M. J., Jan. 13,1912, p. 109; 300 w; 25c.

———. *Small Tunnel Drilling and Blasting;* [1½ miles of 6x6 ft. tunnel in rock at Rochester, N. Y.; from "The Contractor"].—Compr. Air Mag., Apr.,1912; p. 6392; 1800 w; 35c.

———. *Stoping Drills in a Tunnel;* [Kingwood tunnel, B. & O. R. R.].—Mine & Quarry, March,1912; p. 595; 500 w*; 25c.

STOPING; DRIFTING; CHAMBERS; ETC.

Aston, F. J.—*Under What Physical Conditions is the Long-Wall System of Working Coal Most Suitable?*—Sci. & Art of Mng., Apr.27,1912; p. 455; 800 w*; 35c.

Bamberger, C. G.—*Caving System at Ohio Copper Mine;* [Bingham, Utah].—E. & M. J., Apr.6,1912; p. 701; 1800 w*; 25c.

Borghesan, C. E.—*Su di un moderno sistema di coltivazione dei giacimenti metalliferi;* [New mining method; the Rill Stoping system].—Rassegna Mineraria, Jan.21, 1912, p. 41; 3000 w; 35c.

Brinsmade, R. B.—*Mining Without Timber.*—New York, 1911; 303 pp.; 146 illustr.; $3; (book).

Bristol, J. J.—*Stope Measurements;* [Surveying and plotting methods].—Cheml. Met. & Mng. Soc., S. Afr.; Jnl., Dec.,1911; pp. 236; 2800 w*; 90c.

Brown, H. S.—*Placing Holes in Breast Stoping.*—E. & M. J., May4,1912; p. 882; 200 w; 25c.

Burr, F. L.—*Square Set Mining at the Vulcan Mines.*—Lake Superior Mng. Inst., Proc., 1911; pp. 144-155*.

Abstract in Mining & Engg. World, Jan. 13,1912, p. 65; 2500 w*; 10c. Also in Mines & Methods, Feb., p. 409; 2500 w*; 25c. Also in Mines & Minerals, May, p. 613; 2000 w*; 35c.

Concklin, B. M.—*Special Method of Mining on Dangerous Ground on the Mesaba Range, Minnesota;* [Square-set under weak cover].—Wisconsin Engr., Apr.,1912; p. 326; 500 w*; 30c.

Reprint in Mng. Sci., May9, p. 413*; 20c. Also in Mining & Engg. World, May25, p. 1098*; 10c. Also in E. & M. J., June22, p. 1219*; 25c.

Darras, M.—*Méthode d'exploitation des carrières de pierres à ciment;* [Glory-hole method of limestone quarrying at plant of Washington Portland Cement Co., state of Wash.].—Rev. de Matériaux, Feb.,1912; p. 20; 2000 w; 65c.

Ellis, R. W.—*Labor and Efficiency in Mine Operation;* [in driving].—Mining & Engg. World, June15,1912; p. 1250; 500 w*; 10c.

Griffith, Wm., and E. T. Conner.—*Mining Conditions under the City of Scranton, Pa.*—U. S. Bur. Mines, Bull. 25; 1912; 89 pp.; atlas of plates; 20c.

Gullachsen, B. C.—*The Working of the Thick Coal Seams in Upper Silesia;* [Read to N. of Engl. Inst. of Mng. & Mechl. Engrs., 1911; abstract].—Iron & Coal Trades Rev., Oct.20,1911, p. 658; 3500 w*; 30c. Also in Mng. Engg., Dec.,1911, p. 258; 3500 w*; 35c. Also in Coal Age, Apr.6, p. 845; 1500 w*; 20c.

Henrich, C.—*A Problem in Deep-Mine Exploration by Crosscut.*—Mining & Engg. World, June1,1912; p. 1141; 2500 w*; 10c.

Hibbs, Wm.—*Mining the No. 8 Seam in Ohio;* [Practice on Pittsburgh seam].—Coal Age, May18,1912; p. 1036; 1500 w*; 20c.

Hore, R. E.—*The Copper Mining Industry of Michigan;* [Mining practice].—Mining & Engg. World, March30,1912; p. 707; 4000 w*; 10c.

Hughes, W. T.—*Approaching Old Workings;* [Heading and drill-hole practice to prevent possible inundations].—Sci. & Art of Mng., May11,1912; p. 477; 500 w*; 35c.

Kirkham, Wm.—*Sinking Staple Pits;* [Raising a winze].—Art & Sci. of Mng., Jan. 20,1912, p. 270; 1000 w*; 35c.

Liwehr, E.—*Verwendung von Pressluft im Bergbaubetriebe;* [Applications of compressed air in mining; I: Drifting and stoping; II: Drilling and drills].—Zts. f. Kompr. Gase, Dec.,1911; pp. 41-45*; Jan., 1912; pp. 67-72*; Feb., pp. 81-86*; $1.50.

McEachern, Wm. A.—*Top-Slicing at the Caspian Mine.*—Lake Superior Mng. Inst., Proc., 1911; pp. 239-243*.

Abstract in Mining & Engg. World, Jan. 20,1912, p. 119; 1000 w*; 10c. Also in Mines & Methods, Feb., p. 418; 800 w*; 20c. Also in Mines & Minerals, July,1912; p. 733; 1000 w*; 35c.

McMurtrie, S.—*Underground Methods in Indian Mining;* [Coal].—Mng. & Geol. Inst. of India, Trans; Jan.,1912; pp. 257-295*; $2.50.

Nelson, A.—*Guides as to the Length of a Wall Face in Working a Coal Seam 3 ft. Thick and Under.*—Sci. & Art of Mng., May 25,1912; p. 498; 750 w*; 35c.

Powell, J. W., and C. F. Sherman.—*Thick Vertical Seam;* [Method of working 16 ft. coal bed].—Coal Age, May25,1912; p. 1085; 400 w; 20c.

Reynolds, S.—*Longwall and Conservation;* [Advantages over room-and-pillar mining].—Coal Age, Jan.20,1912, p. 475; 1600 w; 20c.

Rice, C. T.—*Baltic Method of Mining.*—E. & M. J., Apr.27,1912; p. 843; May4, p. 897; May11, p. 947; 15,000 w*; 65c.

Rice, C. T.—*Support at the Bottom of a Stope;* [in Calumet & Hecla mines, Mich.].—E. & M. J., March2,1912; p. 443; 1400 w; 25c.

Roberts, F. C.—*Block-Caving and Sub-Stope System at the Tobin Mine, Crystal*

Falls, Mich.—Lake Superior Mng. Inst., Proc., 1911; pp. 218-226*.

Abstract in Mng. Sci., Aug.31,1911, p. 207; 1100 w; 20c. Also in M. & S. P., Sept. 2, p. 491; 1100 w; 20c. Also in Mining & Engg. World, Sept.23, p. 576; 1200 w; 10c. Also in Mex. Mng. Jnl., Feb., p. 33; 1000 w; 25c. Also in Mines & Minerals, June, p. 674; 1200 w*; 35c.

Sperr, F. W.—*The Sublevel Stoping Method.*—E. & M. J., June15,1912; p. 1181; 2000 w*; 25c.

Storms, Wm. H.—*Modern Mining Practice Versus Early-Day Methods.*—Mining & Engg. World, Dec.30,1911, p. 1313; 2400 w*; 10c.

Sullivan, C. P. C.—*Stoping at the Calamon Mine.*—Instn. of Mng. & Met'l'gy, Bull. 88, Jan.,1912; 8 pp.*; Bull. 91, Apr.,1912; p. 7-10; $1. Abstract in E. & M. J., March 30,1912; p. 637; 1000 w*; 25c.

Wolcott, G. E.—*Breaking Ground Without Powder;* [Advocates channeling system and driving in metal mining],—E. & M. J., May25,1912; p. 1047; 1600 w*; 25c.

Watkin, Rob.—*Driving of Drifts Through Water-Bearing Strata;* [Read to Natnl. Asso. of Coll'y Managers, Yorkshire branch; abstract].—Coll'y Guardn., Feb.9, 1912, p. 278; 2000 w; 30c. Iron & Coal Trades Rev., Feb.16, p. 248; 2500 w; 30c.

Wilson, J. B.—*Methods Used in Mining Underground Wide Lodes or Masses;* [Caving, rill, shrinkage, and flat-back-slice and fill systems].—Australian Mng. Standd., Feb.29,1912; p. 193; March14; p. 239; March21, p. 263; 9500 w; 65c.

Wittich, L. L.—*Following the Ore in Joplin Mines;* [Drifting and development methods in "sheet ground," disseminated ore and "soft ground"].—Mines & Minerals, April, 1912; p. 556; 2500 w*; 35c.

———. *Machine Drilling in Stopes.*—S. Afr. Mng. Jnl., Feb.3,1912; p. 784; 500 w; 35c.

———. *New System of Drilling in Stopes at the Jupiter Mine.*—S. Afr. Mng. Jnl., Dec.9,1911, p. 487; 600 w*; 35c.

———. *Versuche und Verbesserungen beim Bergwerksbetriebe,* 1911; [Innovations and improvements in mining practice in Prussia in 1911; stoping and driving and stope filling].—Zts. f. d. Berg-, H-, & Salinenw., Vol. 60, No. 1; 1912; pp. 89-95*; $1.50.

For stope filling or "stowing," see under "Supports."

Mine and Mill Waters; Pumps

GEOLOGY OF MINE WATERS; INUNDATIONS

See also Water Problem in Oil Field, under "Petroleum and Oils."

Albrecht., —. *Ueber die Abhängigkeit der Gefähr eines Wassereinbruchs auf den rheinisch-westfälischen Steinkohlengruben von der verschiedenen Ausbildung des Deckgebirges;* [Relation between overlying rocks and danger of flooding of coal mines in the Rhine-Westphalia region].—Deu. Bergwerks Ztg., Suppl. No. 5; Nov.18,1911, p. 1; 2000 w; 50c.

Beyschlag, Fr.—*Die Verwässerung des Oelgebietes von Tustanowice;* [Nature of the waters inundating the oil wells of the Tustanowice field].—Petroleum, Nov.1,1911, p. 105; 1000 w; 45c.

Fauck, Alb.—*Die Wassereinbrüche in dem Bohrungen von Tustanovice;* [The water inundations in the Tustanovice oil wells; read to Vienna section].—Ver. Bohrtechniker, Organ; Jan.1,1912, p. 3; 1000 w*; 45c.

Franklin, J. S.—*Some Interesting Cases of Sinking Wet Shafts.*—Cassier's Mag., Feb.,1912; pp. 122-131*; 35c. Abstract in Mining & Engg. World, March2, p. 508; 3500 w; 10c.

Frech, Fr.—*Schlesien's Heilquellen in ihrer Beziehung zum Bau der Gebirge;* [The mineral and healing springs of Silesia, and their relation to geologic structure].—Berlin, 1912; 101 pp.; $1; (book).

Herbst, Prof.—*Bergbau und Gebirgswasser;* [Modes of occurence and control of mine waters].—Deu. Bergwerks Ztg., Suppl. No. 8, Dec.20,1911, p. 1; 3000 w; 35c.

Jaczewski, L.—*Kritische Uebersicht der Materialen zur Erforschung der physischchemischen Natur der Wasserquellen;* [Critical review of the literature on the physicochemical nature of springs].—Kgl. Ungar. Geol. Reichsanst., Jahrb, XIX, No. 1; 1911; pp. —; $1.25 (pamphlet).

Keilhack, K.—*Grundwasserstudien; IV: Ueber die Ursache der Spiegelabsenkungen der westlichen Grunewaldseen bei Berlin und Vorschläge zur Abhilfe;* [Ground water studies; IV: Causes of fall of level of the water table about the Grunewald Lakes, Berlin, and methods of control].—Zts. f. prakt. Geol., March,1912; pp. 112-118*; 75c.

Melik-Nibaroff, L.—*Beobachtungen über die Erschöpfung der Erdölhorizonte der Parzelle No. 8 (Firma "Runo") auf Bibi-Eibat und die Erklärung ihrer Verwässerung;* [Determination of the water-bearing horizons on Lot 8, Bibi-Eibat district, and the causes of the flooding of the oil wells].—Kaiserl. Russ. Techn. Ges., Bakou section; Trudy No. 5 and 6, 1911; pp. —*; $1. Abstract in German in Petroleum, March20, 1912; p. 659; 1000 w; 45c.

Noth, J.—*Das Erdöl-und Erdwachsvorkommen von Boryslav-Tustanovicz in Galizien und die Ursachen der Verwässerung, etc.;* [The oil and mineral wax occurrences in, and cause of the flooding of, the Boryslav-Tustanovicz oil field, Galicia; read to Geol. Ges. Wien; abstract].—Organ d... Bohrtechniker, March1,1912, p. 49; 4000 w*: 45c.

Strischoff, J. N.—*Die Feststellung der Horizonte für Wasserabsperrung in den Sonden vom mittleren Teil des Grosnyschen Erdöldistrikts;* [Determination of the water-bearing horizons to be shut off in the central Grosny oil field].—Kaiserl. Russ. Techn. Ges., Grosny section, Arbeiten, 1911, No. 3; 16 pp.

Abstract in Petroleum, Jan.3,1912; p. 351; 500 w; 45c.

Tombelaine, A.—*Géologie et hydrologie du bassin de la Réunion, à Villaneuva Minas. Séville, Espagne;* [Geology and hydrology of Reunion coal basin, Seville, Spain].—Soc. de l'Ind. Minérale, Bull; Feb.,1912; pp. 185-220*; $1.

Zuber, R.—*Die Oel- und Wasserhorizonte von Boryslav-Tustanovica;* [The oil and water horizon of the Boryslav-Tustanovicz oilfields, Galicia].—Petroleum, Feb.7,1912; p. 457; 3500 w*; 45c.

———. *Water in California Oil Fields.*—E. & M. J., March30,1912; p. 644; 500 w; 25c.

WATER TIGHT STRUCTURES; GROUTING; DAMS

See also Cementation Freezing Water Problem in Shaft Sinking, under "Sinking and Driving."

Artingstall, Wm.—*Grouting Leaks in the Washington St. Tunnel under the Chicago*

River; [Read to Westn. Soc. of Engrs.; abstract].—Engg. News, Jan.11,1912; p. 63; 500 w; 25c.

Curtis, B.—*Replacing a Corroded Water Ring in an Old Shaft.*—Sci. & Art of Mng., Dec.23,1911, p. 239; 600 w*; 35c.

Daniels, Jos.—*Wooden-Block Stoppings; Roslyn coal mines, Washington.*—Coal Age, March16,1912, p. 735; 500 w*; 20c.

Gilbert, G. H.; L. I. Wightman; and W. L. Saunders.—*The Subways and Tunnels of New York; Methods and Costs.*—New York; 1912; pp. 372*; $4; (book).

Hulsart, C. R.—*A Test of Watertightness of Concrete Tunnel Lining under High Head;* [Walkill pressure tunnel of Catskill aqueduct, N. Y.].—Engg. News, Dec.14, 1911, p. 710; 3000 w*; 25c.

Nelson, A.—*Fixing of Cast-Iron Tubing in Shafts; and Comparative Merits of Separate Pumping Shafts.*—Sci. & Art. of Mng., March2,1912, p. 354; 1000 w*; 35c.

Pauli, G.—*Abdichten wasserführender Schichten oder dergleichen mittels Betons;* [Cement injection process for shutting off water in drill-holes from water-bearing strata; German Pat. No. 242,339].—Organ d. Bohrtechniker, Apr.15,1912; p. 90; 800 w*; 45c.

Springer, J. F.—*Sealing Off Water in Catskill Aqueduct Shafts.*—E. & M. J., March9,1912, p. 512; 1200 w; 25c.

Watkin, Rob.—*Driving of Drifts Through Water-Bearing Strata;* [Read to Natnl. Asso. of Coll'y Managers, Yorkshire branch; abstract].—Coll'y Guardn., Feb.9, 1912, p. 278; 2000 w; 30c. Iron & Coal Trades Rev., Feb.16, p. 248; 2500 w; 30c.

———. *Timber Dam for Mine Use;* From "Mining Engineering"].—E. & M. J., Jan.20,1912, p. 161; 600 w*; 25c.

TUNNELS OR DRILL HOLES FOR DRAINAGE

Countryman, T. R.—*Present Status of Drainage at Cripple Creek.*—Mng. Sci., Jan. 25,1912, p. 94; 1500 w*; 25c.

Rüdel, R.—*Eine neue Methode zum Entwässern von Grubenfeldern;* [Historical development of the practice of unwatering mines by drill-holes].—Zentral Verbd. Bergbau Betriebsl. Oestr., Zts.; March15,1912; p. 169; 1200 w; 45c.

Weston, W.—*Cripple Creek Drainage.*—E. & M. J., Feb.10,1912; p. 325; 1200 w; 25c.

Wittich, L. L.—*Draining a Shaft Through a Drill Hole;* [Joplin, Mo.]—E. & M. J., March9,1912; p. 491; 500 w; 25c.

Young, Geo. J.—*The Position on the Comstock;* [Includes notes on co-operative drainage and ventilation].—E. & M. J., Jan. 20,1912, p. 167; 4000 w*; 25c.

———. *Panther Creek Drainage Tunnel;* [Lehigh mines from Coalport near Mauch Chunk to Nesquehoning, Shaft No. 2; Penn.].—Mines & Minerals, May,1912; p. 599-601*; 1000 w; 35c.

———. *Rapid Drainage by the Cripple Creek Tunnel.*—Mng. Investor, March18, 1912; pp. 75-81; 1000 w; 20c.

SIPHONS

Parker, Jos.—*The Siphon;* [Read to Natnl. Asso. of Coll'y Managers, Scottish branch].—Iron & Coal Trades Rev., Feb.2, 1912, p. 168; 3000 w*; 30c.

Salzmann, J.—*Entwässern von Grubenfeldern nach der Hebersystem;* [New system of siphon drainage for pits].—Braunkohle, 1912, No. 41, pp. 650-653*; 50c.

J. R. F.—*Siphons.*—Mines & Minerals, Feb.,1912; p. 401; 750 w; 35c.

———. *A Mine Siphon.*—Coal Age, Dec. 30,1911, p. 386; 1200 w*; 20c.

———. *Automatic Drainage;* [Combination of electric pump and self-starting siphon in Pennsylvania colliery].—Mines & Minerals, Apr.,1912; p. 531; 500 w*; 35c.

MINE AND MILL WATER DISPOSAL

Copenharve, Chas.—*Copper Precipitation at Butte, Mont., a Paying Industry;* [From mine waters].—Mining & Engg. World, March30,1912; p. 720; 1200 w; 10c.

Dudley, C. B.—*Coal Mine Waste and Water Pollution;* [Effects on Lackawanna river, Penn.].—Water, Vol. 14, No. 159; pp. 60-62; 75c.

Knauer, H.—*Abwasservereinigung:* [Purification of Waste Waters].—Strelitz, Mecklenburg; 1911; pp. —; $1.25 (book).

Lehmann, M.—*Untersuchungen über den Chlorgehalt des Magdeburger Leitungswassers und des Elbwassers vom linken und rechten Ufer;* [Tests of the chloride content of the Madgeburg water supply along both banks of the Elb river].—Chemiker Ztg., March2,1912; p. 241; 1000 w; 25c.

Nash, W. G.—*Precipitation of Copper from Mine Waters;* [History at Rio Tinto].—M. & S. P., Feb.3,1912; p. 213; 1500 w; 20c.

Richards, J. W.—*Treatment of Mine Water from the Ashio Copper Mine;* [For recovering copper and clarifying discharge]. April,1912, pp. 655-658; 1000 w*; $1.15.

Roberts, T. P.—*Acids in the Monongahela River;* [Drainage of Pittsburgh coal mines and mills; read to Engrs. Soc. of W. Penn.].—Engg. Record, Dec.23,1911, p. 729; 1500 w; 25c.

Ziekursch, —. *Die Entwickelung der staatlichen Wasserversorgungsanlage im oberschlesischen Industriebezirk;* [Development of the municipal water-supply plants in the Upper Silesian mining and industrial region].—Oberschles. Berg- u. H. Ver., Zts., Dec.,1911; p. 521-542*; 45c.

———. *Acid and Iron from Mine Waters* [in Pittsburgh district].—Engg. Record, March9,1912; p. 277; 1400 w; 20c.

———. *Corrosion of Pump Valves by Acid Mine Water.*—Coal Age, Deec.30,1911, p. 387; 500 w; 20c.

———. *Graf Posadowsky über die Schädigung der Flusslaufe durch Kalilaugen;* [Pollution of streams by wastes from potash works; discusses speech of Count Posadowsky in German Reichstag, March 20].—Kali Erz & Kohle, Apr.15,1912; p. 377; 1500 w; 35c.

———. *Perjuicios ocasionados por los derrames de las plantas de cianuracion;* [Methods of waste-cyanide disposition at various leading cyaniding works in Mexico].—Mex. Inst. of Mng. & Met'gy, Vol. II, No. 4, 1911, p. 105; No. 5, p. 154; 10,000 w [in both English and Spanish]; $1. Extracts in Mng. Sci., Oct.5,1911, p. 321; 2800 w; 20c. Also in Metgl. & Cheml. Engg., Nov.,1911, p. 588; 2500 w; 35c.

ELECTRIC AND ROTARY PUMPS

Barbour, P. E.—*Unwatering a Mine with Electric Turbine Pumps;* [at Alta, Utah].—E. & M. J., May25,1912; p. 1027; 1000 w; 25c.

Bergeron, L.—*Le fonctionnement des pompes centrifuges en régime variable;* [The performance of centrifugal pumps

under diverse conditions].—Rev. de Mécanique, Sept.,1911; pp. —. Brief abstract in Génie Civil, Feb.17,1912; p. 318; 300 w; 50c.

Blau, E.—*Rateaupumpen für neuere Wasserhaltungsanlagen;* [The Rateau centrifugal pump for mine drainage].—Kohle u. Erz. Dec.4,1911, p. 1241-1248*; Dec.11, p. 1266-1269*; 50c.

Blau, E.—*Neuere Kreiselpumpen mit hohem Wirkungsgrad;* [Newer high-efficiency centrifugal mine pumps].—Zentral Verbd. Bergbau Betriebsl. Oestr., Zts., Feb. 15,1912; p. 93-101; March1, pp. 121-127*; 4000 w*; 70c.

Brackenbury, C.—*Unwatering Tresavean Mine, Cornwall;* [Advantages of electrical high-lift turbine pumps over cornish pumps].—Instn. of Mng. & Met'l'gy, Bull. 88, Jan.,1912, pp. 35*; 50c. (Discussion), Bull. 89, Feb., p. 3-16; March, p. 33-47*; $1.

Abstract in E. & M. J., Feb.24, p. 397; March2, p. 446; March9, p. 489; March16, p. 538; 4500 w*; 70c. Also in Mines & Minerals, April, p. 566; May, p. 616; 10,000 w*; 65c. Also in Engg. News, May2, p. 836; 3000 w; 25c.

Carpenter, C. A.—*A New Type of Centrifugal Pump for Low Heads at Steam Turbine Speeds;* [New Kerr pump].—Engg. News, June6,1912; p. 1068; 1300 w*; 25c.

Carpenter, C. A.—*Variable Speed Drive of Centrifugal Pumps.*—Engg. Record, June 8,1912; p. 629; 1000 w*; 25c.

Cozzens, H. A., jr.—*Advantages of the Centrifugal Pump;* [From "Southern Engr."].—Mechl. World, Dec.29,1911, p. 305; 1000 w; 20c.

Eddy, L. H.—*Electric Mine Pumps in California.*—E. & M. J., May11,1912; p. 934; 500 w*; 25c.

Edwards, Geo. E.—*Use of Low Pressure Turbines in Mining Work.*—Mining & Engg. World, Jan.13,1912, p. 51; 3000 w*; 10c.

Fleming, B. P., and Stoneking, J. B.—*Tests of Centrifugal Pumps;* [from N. Mex. Agric. Experiment Station, Bull.].—Canadian Engr., Dec.21,1911, p. 697; 2500 w; tables; 25c.

Gassaway, S. G.—*Electric Motors for Oil-Well Service;* [Pumping in California oil fields].—Jnl. of El'y, Power & Gas, Jan.13, 1912; p. 25; 1500 w*; 35c.

Grimshaw, R.—*German Electric Mine Pumps.*—E. & M. J., Jan.20,1912, p. 174; 750 w*; 25c.

Hopkinson, E., and A. E. L. Chorlton.—*The Evolution and Present Development of the Turbine Pump;* [Read to Instn. of Mech. Engrs.; abstract].—Iron & Coal Trades Rev., Jan.26,1912, p. 123; 6000 w*; 30c. Also in Engnrg., Jan.26, p. 107-117; 7000 w*; 30c. Also in Mechl. World, Jan.26, p. 45; Feb.2, p. 55; Feb.9, p. 67; Feb.16, p. 75; Feb.23, p. 87; 6000 w; 80c. Also in El. Rev. (London), Feb.16, p. 279; 2000 w*; 35c. Also in Coll'y Guardn., Feb.9, p. 275; 4800 w*; 30c. Also in Engg. Mag., April, p. 93; 1200 w*; 35c.

Judson, W. R.—*The Testing of Electric Pumps.*—Mex. Mng. Jnl., Jan.,1912, p. 28; 3600 w*; 25c.

Kaplan, —. *Die Berechnung der Flüssigkeitsreibung in Saugrohren, Düsen, und Zellen von Turbinen und Pumpen;* [Estimating friction losses in respiratory pipes, chambers and cells of turbines and pumps, and effect on efficiency].—Zts. f. Turbinenwesen, Feb.,1912; pp. —; March, pp. 136-138; $1.

Koneczny, F.—*Neuere Ausführungen von Zentrifugalpumpen und Messungen an denselben;* [New mine installations and tests of centrifugal pumps].—Montanist. Rundschau, May16,1912; p. 452; June1, p. 527; 4000 w*; 65c.

Körner.—*Die Kreiselpumpe in Betriebe;* [Centrifugal pumps in practice].—Fördertechnik, April,1912; 4 pp*; 65c.

de Laval, C. G.—*Centrifugal Pumping Machinery.*—New York,1912; 184 pp.; 160 figs; $3 (book).

Leese, J. S.—*Control of Centrifugal Pump Motors.*—El. Rev. (London), Dec.16, 1911, p. 991; 600 w; 35c.

Loewenstein, L. C. and C. P. Crissey.—*The Centrifugal Pumps; Design and Construction.*—London, 1911; pp. —; $5.50 (book).

Maxwell, H. B., and S. Zur Nedden.—*The Commercial Economy of Turbine Pumps;* [Read to S. Afr. Inst. of Engrs.; abstract].—S. Afr. Mng. Jnl., May11,1912; p. 397; 2000 w; 35c.

Rogers, J. W.—*Application of Centrifugal Pumps for Boiler Feeding and Hydraulic Installations.*—Engg. Rev., May,1912; p. 441-446; 4000 w*; 35c.

Rogers, J. W.—*High-Speed Turbine Pumps.*—Cassier's Mag., March,1912; p. 204; April, p. 305; 7500 w*; 65c.

Rushmore, D. B.—*Electric Pumping Machinery.*—E. & M. J., Jan.13,1912, p. 111; 750 w*; 25c.

Tupper, C. A.—*Pumping Plant at Sloss Iron Mines, Alabama;* [4-stage centrifugal induction-motor pumps and 750 kw. turbine plant].—E. & M. J., March16,1912, p. 550; 1000 w*; 25c. Reprinted in Power, April9, p. 596*; 15c.

Wagner, H. W.—*The Viking Rotary Pump.*—Iowa Engr., April,1912; p. 282; 1200 w*; 30c.

Wheeler, F. G.—*The Adoption of the Centrifugal Pump to Chemical Problems;* [Read to Amer. Inst. Chem. Engrs., Dec., 1911].—Jnl. of Ind'l & Engg. Chem'y, April, 1912; p. 288; 9000 w*; 65c.

"Brychan."—*Some Welsh Pumps;* [Double-acting force pump and Sulzer high-lift centrifugal electric sinking pump].—Sci. & Art of Mng., Jan.6,1912, p. 243; 1500 w*; 35c.

———. *Electric Pumps for the Chicago Water Works.*—Engg. Record, May 4,1912; p. 503; 600 w; 25c.

———. *High-Tension Pumping Plant with One Leg Earthed;* [at Dover colliery].—Iron & Coal Trades Rev., May3,1912; p. 687; 500 w; 35c.

———. *Hydro-electric Pumping Plant at a Brazilian Gold Mine.*—E. & M. J., Apr. 27,1912; p. 851; 300 w*; 25c.

———. *Small Electric Pumping Plants.*—Jnl. of El'y Power & Gas, March2,1912; p. 198; 3600 w*; 35c.

———. *Recent Improvements in Turbine Sinking Pumps.*—Iron & Coal Trades Rev., March29,1912; p. 496; 2000 w*; 35c.

COMPRESSED AIR PUMPING

Abrams, H. T.—*Pumping by Compressed Air.*—Columbia School of Mines, Quar'ly; April,1912; p. 293-312*; 65c.

Abstract in Met. & Chemi. Engg., May, p. 316; 4000 w*; 35c. Also in Canadian Engr., June13, p. 779; 5000 w*; 25c.

Allen, A. W.—*Air Lifting of Slime Pulp.*—Mng. Mag., April,1912; p. 284; 1800 w*; 45c.

Creen, J.—*Comparative Effect of Air Ves-*

sels on Deep-Well Pumps.—Practl. Engr., Jan.15, 1912; p. 78; 1500 w*; 25c. Abstract in Mechl. World, May31, p. 256; 1200 w*; 35c.

Davis, G. J. and C. R. Weidner.—*An Investigation of the Air Lift Pump.*—Univ. of Wisconsin, Bull. No. 450; Oct.,1911; 167 pp*; 50c.

Abstract in Engg. & Contractg., Feb.14, p. 182; 3000 w*; 20c. Also in Wisconsin Engr., Feb., p. 234; 500 w; 35c. Also in Canadian Engr., Apr.4, p. 481; 4000 w*; 25c. Also in Engg. Mag., May, p. 260; 1500 w*; 35c.

Hanff.—*Entwässerung von Grubenfeldern durch Pressluftpumpen;* [Mine drainage by compressed-air pumps and drill holes].—Braunkohle, March29,1912; p. 821-824*; 50c.

Karbe, —. *Die Arbeitsweise und Berechnung der Mammutpumpen,- Druckflussigkeitsheber;* [Operation of and computations for the Mammut compressed-air pump].—Jnl. f. Gasbeleuchtg., Apr.6,1912; p. 323-329*; Apr.13, pp. 350-356*; 95c.

Miller, F. S.—*Commercial Value of the Air Lift.*—Compr. Air Mag., June,1912; p. 6460; 2200 w; 25c.

Richards, F.—*The Air Lift; Principles Involved, Applications, Pipe Proportions, Pressures and Air Required.*—Practl. Engr., April1,1912; p. 352; 2500 w; 20c.

Abstract in Compr. Air Mag., May, p. 6413; 2500 w*; 25c. Also in Mining & Engg. World, June15, p. 1253; 10c. Also in Mex. Mng. Jnl., July, p. 21; 2500 w; 25c.

Richards, F.—*Raising Water by Compressed Air; Compressed-Air Pumping Systems.*—Power, May14, p. 684; May21, p. 726; 3800 w*; 20c.

Spence, F. C. B.—*Cape May City Air-Lift Well.*—Practl. Engr., April1,1912; p. 355; 500 w*; 20c.

CORNISH AND STEAM PUMPS

Ennis, W. D.—*James Watt in Cornwall in* 1781.—Power, Feb.13,1912; p. 212; 1200 w*; 15c.

Gardner, R. B.—*A Method of Driving Pump Rods by a Geared Pumping Engine.*—Sci. & Art of Mng., Dec.23,1911, p. 235; 200 w*; 35c.

Haigh, S. C.—*The Worthington Pump for Underground Workings.*—Sci. & Art of Mng., March30,1912; p. 404; 600 w*; 35c.

Heys, W.—*Sketch of a Pump to Raise* 6000 *Gallons per Hour Through Height of* 160 *Yards.*—Sci. & Art of Mng., May25, 1912; p. 503; 1000 w*; 35c.

Nelson, A.—*Principles of the Differential or Telescopic Pump, and Application in Deep Mines.*—Sci. & Art of Mng., Apr.27, 1912; p. 449; 100 w*; 35c.

"Brychan."—*Some Welsh Pumps;* [Evans' Wolverhampton Straight Line and Griff Pattern sinking pumps].—Sci. & Art of Mng., Jan. 20,1912, p. 275; 500 w*; 35c.

———. *Horizontal Treble-Ram Pump for a Yorkshire Colliery.*—Iron & Coal Trades Rev., May10,1912; p. 769; 300 w*; 45c.

———. *The "Valiant" Steam Pump.*—Mng. Jnl., Jan.13,1912, p. 57; 800 w; 35c.

PULSATOR PUMPS

Lewis, R. M.—*The Pulsometer, Its Advantages and Disadvantages.*—Sci. & Art of Mng., Jan.20,1912, p. 285; 500 w*; 35c.

Parsons, R. C.—*The Stereophagus Pump.*—Engnrg., Apr.26,1912; p. 571; 500 w; 35c.

Schulz, F. C.—*The Hydropulsator;* [English translation of paper read to the Ver. Deu. Ingr., Hamburg branch].—Stevens Indicator, Vol. 28,1911, No. 4; pp. —*. Reprint in Engg. Rev., March15,1912; p. 372; 7000 w*; 35c.

"Brychan."—*Notes from Wales;* [Pulsometer Pump; Winding Water, Tomson's Systems.—Sci. & Art of Mng., March2,1912, p. 342; 1200 w*; 35c.

———. *A Handy Mine Pump* [Pulsometer of Puls. Steam Co., N. Y.].—Mng. Sci., Feb.1,1912: p. 135: 1000 w*; 20c.

———. *The Stereophagus Pump;* [For unscreened sewage, etc].—Engnrg., Apr.5, 1912; p. 444-446*; 2000 w*; 30c.

WATER METERS AND GAGES

Kummer, W.—*Die Verwendungsmöglichkeit von Wassermessern für Bergbauzwecke;* [Utilization of water meters for mining purposes].—Zentral-Verband Bergb-Betriebsleiter Oestr., Zts., Dec.1,1911, p. 503; 1200 w*; 50c.

Webster, E. H.—*The V-Notch Weir;* [for gaging mine pumping; use at Republica mine, Chihuahua].—E. & M. J., Apr.27,1912; p. 832; 1800 w*; 25c.

WATER FOR FIRE PROTECTION

See also Fire Protection, etc., under "Sanitation; Safety; Rescue."

Newberry, A. W.—*Pumps for Fire Protection;* [Connections with air lines for fire service].—E. & M. J., June1,1912; p. 1075; 500 w*; 25c.

Wilson, H. M.—*Water Supply for Fire Protection in Mines;* [Read to Natnl. Fire Protection Asso., Chicago, May, 1912; extracts from first report on mine-fires committee].—Engg. News, May30,1912; p. 1041; 500 w; 25c.

SINKING PUMPS

See under "Sinking and Driving."

"Brychan."—*Notes from Wales: Dealing With Water During Sinking.*—Sci. & Art of Mng., Dec.23,1911, p. 217; 750 w; 35c.

———. *Abteufpumpe;* [Maffei-Schwartzkopff sinking pump; capacity 6 cu. meters per minute from 300 meters depth].—Fördertechnik, May,1912; p. 106; 750 w*; 65c.

OIL-WELL PUMPING

See Oil-Well Practice under "Petroleum and Oils."

Hager, D.—*Method Employed in Operating Pumping Oil Wells* [in California].—Mining & Engg. World, Apr.13,1912; p. 817; 2200 w*; 10c.

Reprinted in Oil Age, May3, p. 2; p. 6; p. 10; 20c.

Titus, R.—*Oelförderung aus den Oellagerstätten;* [Methods of obtaining oil from oil wells].—Organ d. Bohrtechniker, Apr.15, 1912; p. 86; 2800 w; 45c.

———. *Ideal Liner and Plunger Pumps for Oil Wells.*—Oil Age., June7,1912; p. 7; 500 w*; 20c.

———. *Wilkinson Patent Connecting Rods and Cages for Oil-Well Pumps.*—Oil Age, May3,1912; p. 7; 1000 w*; 20c.

TEXT BOOKS; GENERAL WORKS.

Bethman, H.—*Die Pumpen, deren Berechnung und Konstruktion;* [Pumps, their computation and construction].—Leipzig, 1912; 224 pp.; 252 figs.; $2; (book).

Greene, A. H.—*Pumping Machinery.*—London, 1911; pp. —; (book).

Kegel.—*Bergmännische Wasserwirtschaft;* [Hydraulic science and the mining industry].—Halle, 1912; 211 pp; 105 figs; $3.50 (book).

Royds, R.—*The Testing of Motive Power Engines; Including Steam Engines and Turbines, Locomotives, Boilers, Condensers, Internal Combustion Engines, Gas Producers, Refrigerators, Air Compressors, Fans, Pumps, etc.*—New York, 1911; 396 pp*; $4.00 (book).

MISCELLANEOUS

Baxter, Chas. H.—*Diversion of the Sturgeon River at the Loretto Mine;* [to permit iron mining about river bed].—Lake Superior Mng. Inst., Proc., 1911; pp. 168-170*.

Heys, W.—*A Three-Throw Pump for Draining a Dook 2400 ft. Deep, Dipping 1:5, and Filling at the Rate of 250 gals. per Minute.*—Sci. & Art of Mng., Jan.6,1912, p. 263; 1000 w*; 35c.

Heys, W.—*Principles of the Force Pump.*—Sci. & Art of Mng., March2,1912, p. 359; 1000 w; 35c.

Leese, J. S.—*Hints on Buying Pumps.*—E. & M. J., Feb.17,1912; p. 352; 750 w; 25c.

Leitch, D. C.—*The Rand Water Supply;* [Read to Instn. of Civ. Engrs.; abstract].—Mng. Jnl., Feb.10,1912; p. 135; 1200 w; 35c. Also in Engg. Record, Feb.24, p. 202; 1000 w; 25c.

Morgans, H. M.—*Notes on the Operation of Two Winding Engines;* [Karlik tachograph records of water hoists].—Instn. of Mng. & Met'l'gy, Bull. 88. Jan.1912; 5 pp*; 50. (Discussion), Bull. 89, Feb., p. 17-19; 50c.

Abstract in Coll'y Guardn., Jan.26,1912, p. 177; 1000 w*; 30c.

Mentzell, C.—*Pumps Work After Long Submergence;* [8 years' submergence, Ontario].—E. & M. J., Apr.27,1912; p. 831; 200 w; 25c.

Nelson, A.—*"Bang Pieces" and their Function on Pump Rods.*—Sci. & Art of Mng., Feb.3,1912; p. 308; 700 w; 35c.

West, H. E.—*Comparative Efficiency of Mine Pumping Systems;* [Read to British Instn. of Mng. & Met'l'gy, Jan.,1912].—Mining & Engg. World, March9, p. 552; 800 w; 10c.

"Brychan.—*Notes from Wales; Mine Drainage Systems with Water Barrels.*—Sci. & Art of Mng., Feb.3,1912; p. 298; 1000 w*; 35c.

———. *Draining Gravity Planes.*—E. & M. J., Jan.20,1912, p. 160; 300 w*; 25c.

———. *Problems of Pumping at a Slope Mine.*—Coal Age, Feb.10,1912; p. 586; 500 w; 20c.

———. *Versuche und Verbesserungen beim Bergwerksbetriebe,* 1911; [Innovations and improvements in mining practice in Prussia in 1911; pumping].—Zts. f. d. Berg-, H-, & Salinenw., Vol. 60, No. 1; 1912; pp. 103-104*; $1.50.

Gases; Ventilation

TESTING; ANALYSIS

See also under "Lighting."

For coal dust, firedamp, etc., see under "Sanitation; Safety; Rescue."

Buffet, E. P.—*The "New Nitrogen" in Firedamp;* [Argon, xenon and rare gases].—Coal Age, May25,1912; p. 1081; 750 w; 20c.

Burrell, G. A.—*New Forms of Gas Analysis Apparatus;* [Mine gases; instruments of U. S. Bureau of Mines; read to Amer. Cheml. Soc; abstract].—Coal & Coke Op., Jan.25,1912; p. 49; 2200 w*; 25c. Also in Jnl. of Ind'l & Engg. Chem'y, April, p. 297; 3000 w*; 65c. Also in Mines & Methods, May, p. 480; 6000 w; 20c.

Burrell, G. A.—*Composition of Mine Gases After Explosions and Fires;* [abstract; read to Coal Mng. Inst. of Amer., Dec.,1911].—Coal & Coke Op., Dec.21,1911, p. 402; 2700 w*; 25c. Also in Coal Age, Dec.23, p. 348; 2100 w*; 20c. Also in Coal Trade Bull., Jan.15,1912, p. 31; 2500 w; 25c. Also in Cheml. Engr., Jan.,1912, p. 1; 2500 w*; 35c. Also in Jnl. of Ind'l & Engg. Chem'y, Feb.,1912; p. 96; 2700 w*; 65c. Also in Mines & Minerals, April, p. —; 1500 w; 35c.

Bryson, T.—*The Estimation of Carbon Dioxide in Mine Air.*—Coll'y Guardn. Jan. 26,1912, p. 178; 1000 w*; 30c.

Crane, W. R.—*Special Methods of Testing for Mine Gases;* [Read to Coal Mng. Inst. of Amer.; abstract].—Coal Age, Dec. 30,1911, p. 376; 1200 w*; 20c. Also in Coal Trade Bull., Jan.2,1912, p. 50; 3000 w; 25c. Also in Coal & Coke Op., Jan.4,1912; p. 4; 2800 w; 25c.

Grundy, Jas.—*Gases which may be Expected on Opening an Area which has been sealed Against Gob Fire, and their Detection.*—Sci. & Art of Mng., June8,1912; p. 523; 1000 w; 35c.

Heys, W.—*Means to Ascertain if the Ventilation of a Naked-Lights Mine Be Adequate.*—Sci. & Art of Mng., May25,1912; p. 501; 1500 w*; 35c.

Heys, W.—*Necessary Data to Determine Quantity of Air Circulating in a Mine, and Efficiency of Ventilating Equipment.*—Sci. & Art of Mng., March30,1912; p. 406; 1200 w; 35c.

Moir, J.—*Shaking-Bottle Method for Testing Whether Mine-Air Contains Under 0.2% Carbonic Acid Gas.*—Cheml. Met. & Mng. Soc. of S. Afr., Jnl; Jan.,1912; p. 266; 750 w; 90c.

Rollandet, G. J.—*Detection of Gases in Mines;* [Turquand-Gray process for explosive mixtures in coal and other mines].—Mng. Sci., May30,1912; p. 471; 1500 w*; 20c.

Ryba, G.—*Das Rettungswesen im Bergbau;* [Mine rescue equipment (cont.); Gas indicators and gas sampling].—Zentral Verbd. Bergbau Betriebsl. Oestr., Zts., March1,1912; pp. 130-138*; 45c.

Virgin, Jos.—*Another Method of Testing for Blackdamp;* [Dietz lantern].—Coal Age, Jan.13,1912, p. 457; 750 w; 20c.

Winstanley, G. H.—*Coal-Mine Gases;* [Series of lectures on ventilation standards, firedamp and coal-dust, and safety-lamp as a gas detector; abstract].—Iron & Coal Trade Rev., March29,1912; p. 485; 3000 w; 35c.

M. E.—*Mine Gases and Testing: Firedamp.*—Sci. & Art of Mng., March30,1912; p. 392; 2700 w; 35c.

M. E.—*The Estimation of Oxygen in Mine Air.*—Coll'y Guardn., March 8,1912; p. 480; 600w; 30c.

———. *The "H. W. C." Apparatus for Instruction and Research in Gas-Testing.*—Colliery Guardn., Dec.15,1911, p. 1177; 2000 w*; 35c.

———. *The Simplification of Gas Testing in Mines.*—Iron & Coal Trades Rev., Dec.22,1911, p. 1026; 2500 w; 30c.

FANS

Bennett, B. W.—*Ventilating Equipment of the Pennsylvania Tunnels at New York.*

—Engg. Record, June8,1912; p. 626; 1200 w*; 25c.

Guérin, —. *Installation d'un ventilateur Rateau;* [Installation of a Rateau centrifugal fan at Hornu & Wasmes colliery, Shaft No. 6].—Annales d. Mines (Belgiq.), Vol. 17, No. 2; 1912; p. 410; 1000 w*; 95c.

Heym, W.—*Die Anwendungen der Elektrizität in Grubenbetrieben;* [Applications of electricity in mining; VI: Stamp-mills, fans, telephones, transmission and wiring].—Kali, Erz & Kohle, Jan.15,1912; p. 51; 2800 w; 35c.

Lacroix, —. *Deux ventilateurs actionnés par moteurs électriques à courant triphasés dont un a vitesse variable;* [Two 3-phase electric ventilating fans at the Escarpelle collieries, one operating with variable speed].—Soc. de l'Ind. Minrl. St. Etienne, C-R., Oct.,1911, p. 571; 500 w; 75c.

Leese, J. S.—*Low Pressure Fans.*—Power, March19,1912; p. 394; 1000 w; 15c.

Letcher, O.—*Improved Working Conditions in Rand Mines;* [Dust problem].—Mining & Engg. World, Apr.6,1912; p. 762; 1200 w; 10c.

Royds, R.—*The Testing of Motive Power Engines; Including Steam Engines and Turbines, Locomotives, Boilers, Condensers, Internal Combustion Engines, Gas Producers, Refrigerators, Air Compressors, Fans, Pumps, etc.*—New York, 1911; 396 pp*; $4.00 (book).

Virgin, R. Z., R. J. Pickett, J. C. Babb, and others.—*Booster and Tandem Fans;* [Series of letters on open discussion].—Coal Age, June8,1912; p. 1150; June22, p. 1223; 5600 w*; 40c.

Weigel, W. M.—*Coal Mine Ventilating Equipment.*—Coal Age, Jan.13,1912; p. 441; Jan.20, p. 470; Jan.27, p. 512; Feb. 17, p. 610; March2, p. 671; March16, p. —; 17, p. 610; March2, p. 671; March23, p. 769; June29, p. 1242; 11,000 w*; 85c.

———. *Design of Centrifugal Mine Fans.*—Coal Age, Dec.30,1911, p. 387; 500 w; 20c.

VENTILATION; VOLUME AND PRESSURE

Contzen, H.—*Messgeräte für Druck und Geschwindigkeit von Gasen und Dampfen;* [Meters for pressure and speed of gases and steam; supplementary to E. Stach's paper of 1911]—Stahl & Eisen, Apr.4,1912; p. 573; 1200 w*; 75c.

Farmer, G.—*Practical Mathematics for Miners: Volume and Pressure in Mine Ventilation.*—Sci. & Art of Mng., Jan.6,1912, p. 250; 1200 w; 35c.

Lynde, F.—*The Water Gauge as Used in Mines;* [Calculation of ventilation pressure].—Coal Age, Jan.13,1912, p. 446; 1000 w*; 20c.

Young, C. M.—*Coal Dust Explosions and Quantity of Air.*—Mines & Minerals, Jan., 1912; p. 350; 1000 w; 35c.

M. E.—*Notes for Colliery Firemen; XI; Regulation of Air.*—Sci. & Art of Mng., Feb.3,1912; p. 290; 1500 w; 35c.

———. *Hydro Indicating and Recording Meters;* [Pressure and quantity gauges for mine fans].—Coal & Coke Op., Apr.18,1912; p. 243; 1000 w*; 25c.

———. *The Davis-Biram Anemometer for Use in Mines.*—Iron & Coal Trades Rev., Jan.26,1912, p. 138; 500 w*; 30c. Also in E. & M. J., Feb.17,1912, p. 358; 500 w*; 25c.

———. *The Estimation and Adjustment of Quantity of Ventilation.*—Sci. & Art of Mng., Jan.6,1912, p. 248; 1200 w; 35c.

AIR-WAYS; DIRECTION AND DIVISION

Arlt, W.—*Untersuchung über Wetterführung mittels Lutten;* [Researches on ventilation by means of air-pipes].—Berlin, 1912; 67 pp.*; 75c (pamphlet).

Hartill, B.—*Short-Circuiting Air Current; Effect on Speed of Fan.*—Coal Age, Apr.20,1912; p. 919; 1000 w; 20c.

Head, J. Wm.—*Reversing the Ventilation of Mines.*—Mng. Engg., Feb.,1912; p. 305; 1000 w*; 35c.

John, H.—*Rockvale New Air Slope;* [Fremont county, Colo.].—Mines & Minerals, June,1912; p. 653; 600 w*; 35c.

Kilpatrick, Wm. M.—*What Would Happen to the Fan if the Doors at the Top of the Upcast were Suddenly Opened?*—Sci. & Art of Mng., Apr.27,1912; p. 440; 500 w; 35c.

Siddall, F. N.—*Reversing the Air Current;* [Read to Natnl. Asso. of Coll'y Managers; abstract].—Iron & Coal Trades Rev., Dec.15,1911, p. —; Apr.26,1912, p. 648; 3000 w.; 50c. Also in Mng. Engg., Jan., 1912; p. 284; 1500 w; 35c.

Steel, A. A.—*Overcasts with Light Walls.*—Mines & Minerals, April,1912; p. 515; 1000 w*; 35c.

"M. E."—*Notes for Colliery Firemen; The Splitting of Air.*—Art & Sci. of Mng., Jan.20,1912, p. 272; 1800 w; 35c.

———. *The Laws of Friction;* [For mine air currents].—Coal & Coke Op., Jan.4,1912; p. 3; 400 w; 25c.

———. *What Would Happen to the Fan if the Doors at the Top of the Upcast were Suddenly Opened?*—Sci. & Art of Mng., March30,1912; p. 394; 1500 w; 35c.

HUMIDIFYING; DRYING

Ashworth, J., and S. Dean.—*Humidifying Mine Air;* [Comments on Dalrymple's paper].—Mines & Minerals, June,1912; p. 659; 400 w; 35c.

Cunliffe, J.—*Ventilating Pressure: Definition and Governing Factors.*—Sci. & Art of Mng., Jan.6,1912, p. 262; 1000 w; 35c.

Dalrymple, J.—*Humidifying Mine Air;* [Practice and results in Colorado].—Mines & Minerals, Apr.,1912; p. 535; 500 w; 35c.

Eddy, L. H.—*Drying Air in a Mine Telephone;* [in gold mines of Mother Lode, Cal.].—E. & M. J., June8,1912; p. 1127; 600 w; 25c.

Hays, W.—*The Hygrometer, and Its Use in Mines.*—Sci. & Art of Mng., Jan.20,1912, p. 286; 1000 w*; 35c.

Proctor, W.—*Description of a New Mine Humidifier.*—Coal & Coke Op., Jan.18,1912, p. 33; 3200 w; 20c.

———. *Col. T. E. Tierney's System of Mine Humidification* [in West Virginia].—Coal & Coke Op., March7,1912, p. 148; 1500 w; 25c. Also in Coal Age, March23, p. 777; 1000 w; 20c. Also in Mines & Minerals, April, p. 531; 500 w*; 35c.

DUST CONTROL

See also under "Drilling and Boring."

Jourdan, C. J. N.—*The Prevention of Dust in the Development of Drives of Mines During Drilling Operations;* [Watering holes while drilling; read to S. Afr. Inst. of Engrs.; abstract].—S. Afr. Mng. Jnl., Sept. 16,1911, p. 43; March16,1912, p. 65; 5000 w; 50c.

Abstracted also in South Afr. Engg., Oct. 31, p. 57; 76; 1500 w; 35c. Also in W. Australian Mng., etc., Jnl., Dec.9,1911, p. 7; 1800 w; 50c. Reviewed in Engg. &

Contractg., Jan.10,1912; p. 35; Jan.17, p. 58; 1300 w; 30c.

———. *Das Stosstränken in Bergwerken;* [The drenching of the coal face with water injected into drill-holes to prevent dusting].—Kohle & Erz, Apr.29,1912; p. 410; 1000 w; 35c.

FIRE DAMP AND COAL DUST

See under Accidents; also Hygiene, Safety & Rescue.

Chamberlin, R. T.—*Notes on Explosive Mine Gases and Dusts, with Special Reference to the Monongah, Darr and Naomi Mines;* [Reprint of U. S. Geol. Survey Bull. 383].—U. S. Bur. of Mines, Bull. 26; 1911; 65 pp; 25c.

Cunningham, W. H. and C. R. Conner.—*Release of Gas Accumulations;* [Gas explosions in abandoned workings, and borings for release of gas; read to Kentucky Mng. Inst.].—Coal Age, Dec.30,1911, p. 370; 1800 w*; 25c. Also in Mines & Minerals, Feb., 1912, p. 409; 1800 w*; 35c.

David, W. T.—*Radiation in Explosions of Coal Gas and Air.*—London, 1911; 24 pp.; 75c; (pamphlet).

Grundy, Jas.—*Method of Clearing Out an Accumulation of Firedamp or of Blackdamp in a Narrow Heading.*—Sci. & Art of Mng., Dec.23,1911, p. 235; 1000 w*; 35c.

Heys, W.—*The Expansive Properties of Firedamp when Mixed with Air and at Ignition.*—Sci. & Art. of Mng., March30,1912; p. 405; 750 w; 35c.

von Rosen.—*Plötzliche Gasausbrüche;* [Some sudden gas outbreaks in Belgian collieries].—Bergbau, Feb.29,1912; p. 121; 1800 w; 35c.

Wilbur, F. I.—*Methane in Coal Dust Explosions.*—Coal Age, Feb.17,1912; p. 609; 3600 w; 20c.

M. E.—*Black Damp.*—Sci. & Art of Mng., March16,1912; p. 370; 2000 w; 35c.

———. *Black Damp;* [Discusses its definition and nature].—Coal Age, Jan.6, 1912, p. 426; 1200 w; 20c.

M. E.—*After-Damp and Colliery Explosions;* [Includes historical record of explosions].—Sci. & Art of Mng., May11,1912; p. 464; 2400 w; 35c.

———. *Ventilating Blind Chutes in Gaseous Mines.*—Mines & Minerals, Feb., 1912; p. 403; 500 w; 35c.

PATHOLOGY AND CONDITIONING OF MINE AIR

For pulmonary and other miners' diseases, see under "Sanitation," etc.

Carrier, W. H. and F. L. Busey.—*Air Conditioning Apparatus; Principles Governing Application and Operation;* [Read to Amer. Soc. Mech. Engrs., Dec.,1911; abstract].—Ind'l Engg., Feb.,1912; p. 117; 4500 w*; 35c.

Chance, E. M.—*The Examination and Physiological Action of Pathogenic Mine Atmospheres.*—Franklin Inst., Jnl., Nov., 1911, pp. 461-494; 65c. Abstract in Coal Age, Dec.30,1911, p. 373; Jan.13,1912, p. 448; Jan.27, p. 506; March16, p. 750; 9000 w; 50c.

Nelson, A.—*Methods of Detecting Principal Mine Gases, and Proportion of Air Required to Render Them Harmless.*—Sci. & Art of Mng., Apr.27,1912; p. 450; 1600 w*; 35c.

Nelson, A.—*Impure Air in Mines; Causes and Remedies.*—Sci. & Art of Mng., Jan.6, 1912, p. 259; 1500 w; 35c.

Sperlingk, H., and C. Jarrijon.—*Les locomotives à essence pour mines;* [Gasoline locomotives for mines and the question of atmospheric vitiation by fumes].—Echo d. Mines, Jan.18,1912, p. 77; Jan.25, p. 106; 750 w; 50c.

Storet, M.—*De l'oxyde de carbone;* [Carbon monoxide and dioxide, and their effect in mine atmospheres].—Soc. Amicale d. Mineurs de Douai, Bull., March25,1912; p. 170-179; 2500 w; 35c.

Queensland Miners' Health Commission.—*Conditions in Regard to Temperature and Dust from Ores;* [From report in Qu. Govt. Mng. Jnl.].—Mines & Minerals, Feb.,1912; p. 441; 2000 w*; 35c.

Whitehouse, J., and W. L. Witherspoon.—*Some Aspects of Mine Ventilation and Temperature on the Witwatersrand.*—Chemi. Met. & Mng. Soc. of S. Afr., Jnl., June,1911, pp. —; July, p. 15-16; Aug., p. 48; Sept., p. 96-7; Oct., p. 126-128; Nov., p. 128-129.

———. *Artificial Cooling in Deep Mines.*—Mining & Engg. World, Jan.13,1912, p. 49; 100 w; 10c.

MISCELLANEOUS

Beard, J. T.—*Points in Mine Ventilation;* [Diffusion; detection of CO; pressure vs. power; oxygen for carbide lamps; read to W. Va. Coal Mng. Inst.].—Coal Age, June 8,1912; p. 1135; 3000 w; 20c. Also in Coal & Coke Op., June13, p. 371; 3000 w; 25c.

Daniels, Jos.—*Wooden-Block Stoppings;* [Roslyn coal mines, Washington].—Coal Age, March16,1912, p. 735; 500 w*; 20c.

Heys, W.—*Ventilation in Sinking Two Shafts 1500 Ft. Deep, Close Together.*—Sci. & Art of Mng., Apr.27,1912; p. 454; 750 w*; 35c.

Heys, W.—*The Value of Meteorologic Colliery Warnings Published in the Daily Papers.*—Sci. & Art of Mng., March30,1912; p. 407; 1600 w; 35c.

Loring, F. C.—*Ventilation in Metal Mines.*—Canadian Mng. Inst., Bull. 18, Feb.,1912; p. 27; 1800 w; $1.20. Abstract in Mng. Sci., Apr.25, p. 370; 1500 w; 20c.

Malherbe, D. G.—*Ventilation in Mines;* [Suggests improvements for Rand].—S. Afr. Mng. Jnl., Feb.3,1912; p. 805; 1000 w; 35c.

Nelms, H. J.—A Ventilating System Without Doors.—Coal Age, June8,1912; p. 1138; 1000 w*; 20c.

Schmitt, —. *Zur Meteorologie der Kohlengrube;* [The meteorology of coal mines].—Glückauf, May4,1912; pp. 714-717; 50c.

Winstanley, G. H.—*The Physical and Chemical Properties of the Gases Met with in Coal Mines.*—Coll'y Guardn., Jan.26,1912. p. 182; 1200 w; 30c. Also in Iron & Coal Trades Rev., Jan.12,1912, p. 47; 2500 w; 30c.

Young, Geo. J.—*The Position on the Comstock;* [Includes notes on co-operative drainage and ventilation].—E. & M. J., Jan. 20,1912, p. 167; 4000 w*; 25c.

———. *Afterdamp;* [Discusses proper definition].—Coal Age, March2,1912; p. 683; 1000 w; 20c.

———. *New Zealand Mine Regulations;* [on safety, sanitation and ventilation].—Mng. Jnl., June15,1912; p. 555; 2100 w; 35c.

———. *Versuche und Verbesserungen beim Bergwerksbetriebe,* 1911; [Innovations and improvements in mining practice in Prussia in 1911; ventilating].—Zts. f. d. Berg-, H-, & Saninenw., Vol. 60, No. 1; 1912; pp. 123-126*; $1.50.

VENTILATION-BLASTING PROBLEM

Dean, S.—*The Problem of Reducing Ventilation When Firing.*—Coal Age, May11, 1912; p. 1018; 750 w; 20c.

Hogan, P.—*The Question of Reducing Ventilation When Firing.*—Coal Age, Apr.6, 1912; p. 849; 750 w; 20c.

Verner, J.—*Firing Shots in Still Air;* [Favors shutting down ventilation in shooting].—Coal Age, June1,1912; p. 1107; 1100 w; 20c.

Virgin, R. Z.—*Normal Ventilation at Firing Time;* [Opposes decrease in air current at shot firing].—Coal Age, March30,1912; p. 817; 750 w; 20c.

Wade, A. Y.—*The Question of Reducing Ventilation When Firing.*—Coal Age, Apr. 13,1912; p. 884; 1200 w; 20c.

Wilhelmi, A.—*Verfahren und Apparat zur Untersuchung der Nachschwaden von Explosivstoffen;* [Process and apparatus for determining the nature of after-gases in blasting explosives].—Zts. f. Sprengstoffw., March15,1912; p. 112; 1000 w*; 35c.

MINE AND DEEP-ROCK TEMPERATURES

Dietz, Dr.—*Die hohen Temperaturen auf dem Comstock Lode und ihre Einwirkung auf die Bergleute;* [High temperatures in the Comstock Lode and their effects on miners; from Monogr. of U. S. Geol. Survey, No. 4].—Kohle & Erz, May6,1912; p. 458; 4000 w; 35c.

Dietz, —. *Ueber die Bekämpfung hoher Temperaturen im Bergbau;* [Overcoming high temperatures in mines].—Zts. f. Kälte Industrie, Dec.,1911, pp. 221-223; 75c.

Hanauer, W.—*Die Einwirkung des Klimas in Bergwerken auf die Bergarbeiter;* [Influence of mine temperatures and atmospheric conditions on the workman].—Oestr. Zts. f. Berg- & H-wesen, Jan.6,1912; p.10; 1400 w; 45c.

English abstract in E. & M. J., Apr.27, p. 852; 1200 w; 25c.

Höfer, Hans von.—*Die Temperaturen in den Erdölgebieten;* [Earth temperatures as revealed in oil-well drillings].—Organ d. Bohrtechniker, Dec.1,1911, p. 279; 1600 w; 45c.

Königsberger, J.—*Ueber Messungen der geothermischen Tiefenstufe, deren Technik und Verwertung zur geologischen Prognose, und über neue Messungen in Mexico, Borner und Mitteleuropa;* [The measurement of deep rock temperatures, and the value of the knowledge of isogeotherms in geologic prospecting; with notes on new measurements in Mexico, Borneo and central European oil fields].—N. Jahrb. f. Mineralogie, Geol., etc.; Beilagebd., Vol. 31; 1911; pp. —; (book).

Lauchli, E.—*Determination of Probable Rock Temperature in a Continental Divide Tunnel;* [deeply overlaid 6-mile tunnel under continental divide, Colorado].—Engg. Record, June8,1912; pp. 619-622; 4000 w*; 25c.

Leask, A. R.—*Refrigerating Machinery, its Principles and Management.*—London, 1912 (5th edition); 310 pp.; $1.75; (book).

Michael, R., and W. Quitzow.—*Temperaturmessungen im Tiefbohrloch Czuchow II, Oberschlesien;* [Temperature records in the Czuchow drill hole, Silesia, world's deepest boring].—Zen tralbl. f. Mineralogie, etc.; Feb.,1912; p. 43-45; $1.

TEXT BOOKS; GENERAL WORKS

Haldane, J. S.—*Methods of Air Analysis;* [Chiefly mine airs].—London, 1912; pp. —; $1.75; (book).

Editorial review and discussion in Coll'y Guardn., Apr.26,1912; p. 845; 1500 w; 35c.

Mintrop, L.—*Mitteilungen der Wetterwarte der westfälischen Berggewerkschaftskasse;* [Meteorologic instruments, their use and function in the Westphalian mining district].—Glückauf, Jan.6,1912, pp. 15-22*; 50c.

Schoew, K. F.—*Quality and Quantity of Air;* [Read to W. Va. Mng. Inst., June, 1912; abstract].—Coal & Coke Op., June6, 1912; p. 354; 3000 w; 25c. Abstract in Coal Age, June15, p. 1177; 2100 w; 20c.

Supports: Props, Pillars, Stowing

GEOLOGY; EARTH PRESSURES

Hepplewhite, W. H.—*The Action and Control of Differently Constituted Coal-Bed Roofs;* [Read to Midland Counties Instn. of Engrs.].—Iron & Coal Trades Rev., Dec.15, 1911, p. 970; March8, p. 372; 8000 w; 50c. Also in Coll'y Guardn., Dec.22, p. 1247; March8, p. 481; 7000 w; 50c. Also in Coal Age, March23, p. 779; 1200 w; 20c.

King, L. V.—*On the Limiting Strength of Rocks under the Conditions of Stress Existing in the Earth's Interior.*—Jnl. of Geol'y, Feb.-March,1912; pp. 119-138*; 65c.

Krey, H.—*Erddruck, Erdwiderstand und Tragfähigkeit des Baugrundes in grösserer Tiefe;* [Rock pressures, rock resistances, and load capacity of earth and bedrock at greater depths].—Berlin, 1912; 51 pp.; 32 figs.; $1.50; (pamphlet).

Meem, J. C.—*Notes and Experiments on Earth Pressures.*—Engrs. Club of Phila., Proc; April,1912; 17 pp; 40c.

SUBSIDENCES; FALLS

Chilton, Jas.—*Accidents in Transvaal Mines with Special Reference to Falls of Ground.*—Chemi. Met. & Mng. Soc. of S. Afr., Jnl., Nov.,1911, p. 158-166*; (Discussion), Dec., pp. 230-236; Jan., p. 280-287; Feb., pp. 319-332; March, pp. 367-375; April, pp. 408-414; May, pp. ——; $4.95.

Abstract in S. Afr. Mng. Jnl., Nov.25, 1911; p. 410; 1000 w; 35c. Also in E. & M. J., July20, p. 103; 1800 w; 25c.

Gaskell, T.—*Causes of Falls of Roof and Sides, and Precautions.*—Sci. & Art of Mng., March30,1912; p. 401; 1000 w; 35c.

Goetz, Fr.—*Ausbildung der Strassenbahnanlagen mit Rücksicht auf die Bodenbewegungen im Senkungsgebiete des rheinisch-westfälischen Kohlenbergbaues;* [Studies in street railway construction with special reference to subsidences in the Rhine-Westphalian coal mining region].—Darmstadt Techn. Hochschule dissert., 1911; 63 pp; 8 figs; $1 (Thesis).

Goldreich, H.—*Die Theorie der Bahnsenkungen im Bergbaugebiete mit besonderer Berücksichtigung des Ostrau-Karwiner Kohlenrevieres;* [Theory of land subsidence and railroad-track displacements in mining regions, especially in Ostrau-Karwin coal field, Austria.].—Oestr. Ingr. & Archt. Ver., Zts.; Jan.19,1912; p. 42; 1000 w; 35c.

Griffith, Wm., and E. T. Conner.—*Mining Conditions under the City of Scranton, Pa.*—U. S. Bur. Mines, Bull. 25; 1912; 89 pp.; atlas of plates; 20c.

Thiriart, L.—*Les affaissements du sol produits par l'exploitation houillère;* [Soil subsidences as produced by coal mining in Belgium].—Annales d. Mines (Belgiq.), 1912; No. 1, pp. 3-64*; 95c. Abstract in

Soc. Amicale Ecole Douai, Bull., March, p. 136; 1000 w; 35c.

S. T. A.—*Seismic Unrest and Falls of Roof.*—Coal Age, March16,1912, p. 751; 1000 w; 20c.

———. *Testing the Bearing Capacity of Earth in Excavations.*—Engg. Record, May25,1912; p. 584; 1000 w*; 25c.

PILLARS; PILLAR REMOVAL

Bunting, D.—*Chamber Pillars in Anthracite Mines.*—Amer. Inst. Mng. Engrs., Bull. 57, Sept.,1911, p. 739; 3000 w; tables; $1.15. Reprinted in E. & M. J., July 1, p. 26; 3000 w; 25c. Also in Black Diamond, Sept. 9, p. 11; 3000 w*; 30c. Also in Coll'y Guardn., Nov.3, p. 867; 1400 w*; 30c. Also in Coal Trade Bull., Jan.15,1912, p. 53; 3000 w; 25c.

Lynde, F.—*Pillar Drawing in Contiguous Seams.*—Coal Age, Jan.27,1912, p. 510; 1000 w*; 20c.

TIMBERING

Aston, F. J.—*Different Methods of Securing a Main Haulage Road and Pit Bottom, Respectively.*—Sci. & Art of Mng., March16, 1912; p. 380; 1000 w*; 35c.

Burr, F. L.—*Square Set Mining at the Vulcan Mines.*—Lake Superior Mng. Inst., Proc. 1911; pp. 144-155*; $1.

Abstract in Mining & Engg. World, Jan. 13,1912; p. 65; 2500 w*; 10c. Also in Mines & Methods, Feb., p. 409; 2500 w*; 25c. Also in Mines & Minerals, May, p. 613; 2000 w*; 35c.

Desenfans, G.—*Trucs pour la descente des long bois dans le puits;* [Trucks for lowering large timbers into mines; equipment and practice at Escouffiaux colliery, Belgium].—Annales d. Mines (Belgiq.), Vol. 17, No. 2; 1912; p. 406; 750 w*; 95c.

Goodale, S. L.—*Systematic Timbering; The H. C. Frick Coke Co. System of Mining and Timbering in the Connellsville District.*—Colo. School of Mines Mag., Apr.,1912; p. 145; 5000 w*; 50c.

Hughes, W. T.—*Timbering in Long-Wall Face with Coal Cutters.*—Sci. & Art of Mng., March2.1912, p. 356; 750 w*; 35c.

Lakes, Harold.—*Methods of Handling Running and Swelling Ground.*—Mining & Engg. World, Dec.9,1911, p. 1156; 1600 w*; 10c. Abstract in Engg. & Contractg., Dec.20, p. 650; 1000 w*; 25c.

Nelson, A.—*Precautions and Appliances in the Withdrawal of Props.*—Sci. & Art of Mng., Jan.20,1912, p. 283; 600 w*; 35c.

Nelson, A.—*The Square Set System of Timbering, and How Applied.*—Sci. & Art of Mng., March30,1912; p. 401; 500 w*; 35c.

Nelson, A.—*How to Clean Up and Re-Timber a Large Fall in Main Haulage Road under Great Side Pressure.*—Sci. & Art of Mng., Feb.3,1912; p. 305; 1000 w*; 35c.

Rice, C. T.—*Support at the Bottom of a Stope;* [in Calumet & Hecla mines, Mich.].—E. & M. J., March2,1912; p. 443; 1400 w; 25c.

Rice, C. T.—*Combination of Post and Set Timbering in Shafts;* [Inclined shafts of Michigan copper belt].—E. & M. J., Feb.10, 1912; p. 302; 1500 w*; 25c.

Rice, C. T.—*Battery Method of Stull Timbering.*—E. & M. J., Feb.3,1912; p. 255; 1500 w*; 25c. Reprint in Queensl. Govt. Mng. Jnl., May,1912, p. 215; 35c.

Storms, Wm. H.—*Modern Mining Practice Versus Early-Day Methods.*—Mining & Engg. World, Dec.30,1911, p. 1313; 2400 w*; 10c.

Virgin, R. Z.—*Timbering a Mine Parting* [under a tender roof].—Coal Age, May4, 1912; p. 979; 1000 w*; 20c.

———. *A Timber Puller;* ["Sylat" safety proper remover].—Coal Age, May25, 1912; p. 1078; 1000 w*; 20c.

———. *Cross-Bar Timbering in Mines.*—Coal Age, Feb.17,1912; p. 620; 600 w; 20c.

———. *Fahrbare Grubenkriessäge mit Druckluftantrieb;* [Portable rotary saw for mines, with compressed-air drive].—Glückauf, March16,1912; p. 442; 250 w; 45c.

———. *Finger-Pin Timbering in Swelling Ground* [on Comstock lode].—E. & M. J., Feb.17,1912; p. 349; 600 w*; 20c.

———. *Joint for Drift Timbers Subject to Side Pressure.*—E. & M. J., June8,1912; p. 1127; 300 w*; 25c.

———. *The Supply of Mining Timber;* [Reforestration in Australia].—Australian Mng. Standd., Jan.18,1912; p. 41; 800 w; 35c.

———. *Triangular Timbering in Tonopah-Belmont Mine.*—E. & M. J., May11, 1912; p. 931; 500 w*; 25c.

———. *Versuche und Verbesserungen beim Bergwerksbetriebe,* 1911; [Innovations and improvements in mining practice in Prussia in 1911; shaft support; mine timbering and props].—Zts. f. d. Berg-, H-, & Salinenw., Vol. 60, No. 1; 1912; pp. 95-103*; $1.50.

TIMBER PRESERVATION

Allerton, D.—*Creosotes and Creosoting Oils.*—Amer. Wood Preservers Asso., Proc.; 1912; pp. 192-196; $2.

Church, S. R.—*Creosote Oil—Specifications and Methods of Analysis.*—Amer. Wood Preservers Asso., Proc., 1912; pp. 94-107; $2.

Goltra, W. F.—*A New Type of Timber Treating Plant.*—Engg. Record, Jan.6,1912; p. 73; 1200 w; 35c.

Landau, —. *Konservierung von Grubenhölzern;* [Preservation of mine timbers; methods and costs in Germany].—Bergbau, Apr.4,1912; p. 195-196; 1500 w; 35c.

McDonald, G. B.—*Preservation of Mine Timbers.*—Iowa Engr., Jan.,1912; p. 103-110*; 3000 w; 25c.

Reprint in Mining & Engg. World, May 18, p. 1049; 3000 w; 10c. Also in Coal & Coke Op., May30, p. 337; 3000 w; 20c. Abstract in Sci. & Art of Mng., June8, p. 512; 2200 w; 35c. Also in Coal Age, June 8, p. 1144; 1000 w; 20c. Also in Mex. Mng. Jnl., June, p. 24; 3000 w; 25c. Also in Mines & Methods, June, p. 509; 3000 w*; 20c.

MacLean, J. D.—*Wood Preservation.*—Wisconsin Engr., Apr.,1912; p. 310; 2500 w; 30c.

Peters, E. W.—*The Preservation of Mine Timbers.*—U. S. Forest Service, Bull. 107; 1912; 27 pp*; 20c. Abstract in Mining & Engg. World, July6, p. 7; 5000 w*; 10c.

Sackett, H. S.—*Preservatives Used in 1910; and List of Wood Preserving Plants in the United States.*—Amer. Wood Preservers Asso., Proc.; 1912; pp. 282-286; $2.

von Schrenk, H.—*Creosote Specifications and Analysis.*—Amer. Wood Preservers Asso., Proc.; 1912; pp. 196-205*; $2.

Taylor, C. M., and others.—*Standard Analysis for Chloride of Zinc for Wood Preserving Purposes.*—Amer. Wood Preservers Asso., Proc.; 1912; pp. 230-235; $2.

Waterman, J. H.—*Arrangement of Yard, Piling, Ties and Timber, etc.*—Amer. Wood Preservers Asso., Proc.; 1912; pp. 205-219*; $2.

Weiss, J. M.—*The Antiseptic Effect of Creosote Oil and Other Oils Used for Preserving Timber.*—Soc. of Cheml. Ind'y, Jnl., Dec.15,1911, p. 1348; 3500 w; 65c.

Wood Preservers' Asso.—*Papers on Timber Preservation;* [3d annual meeting, Chicago, Jan. 1912].—Engg. News, Jan.25,1912; p. 179; 1600 w; 25c.

———. *Cutting and Seasoning Timber.*—Amer. Wood Preservers Asso., Proc.; 1912; pp. 61-74*; $2.

———. *The Effect of Salt Impregnation on Timber.*—Engg. Record, Feb.3,1912; p. 124; 500 w; 20c.

———. *The Scientific Management of Timber Preserving Plants.*—Amer. Wood Preservers Asso., Proc.; 1912; pp. 74-93; $2.

———. *Treatment of Mine Timbers.*—Coal Age, Dec.30.1911. p. 382; 750 w; 20c.

STEEL AND IRON PROPS

Trenz, R.—*Eiserne Grubenstempel;* [Iron mine posts].—Stein & Braunkohle, Feb.15,1912, p. 39; 1500 w*; 35c.

Woodworth, R. B.—*The Problem of Mine Timbering;* [Steel timbering; read to Kentucky Mng. Inst.; abstract].—Coal Age, Feb.10,1912, p. 570; Feb.24, p. 636; March9, p. 700; March30, p. 809; Apr.13, p. 873; 11,000 w*; 65c.

Also abstracted in Coal & Coke Op., Feb. 22, p. 113; Feb. 29, p. 129; 10,000 w*; 30c. Also in Mex. Mng. Jnl., March, p. 34; April, p. 27; 9000 w*; 40c. Also in Mining & Engg. World, March30,1912, p. 715; 3600 w*; 10c.

———. *The Mannesman Steel Mine Prop.*—Coal Age, May11,1912; p. 1010; 300 w*; 20c.

CONCRETE

Homann, Labes, and others.—*Handbuch für Eisenbetonbau, Band VII;* [Manual of Reinforced Concrete Engineering; Vol. VII, Roilroads, Tunnels and Mining; Chapter VII, by B. Nast, Concrete and reinforced concrete in mine shafts, roadways, workings, and above ground].—Berlin, 1912; (2d edition); pp. —; 1093 figs.; $8; (book).

Meuskens, C.—*Verfahren zur Nutzbarmachung des Eisenbetons zum Ausbau von Schächten in druckhaftem Gebirge;* [Use of reinforced concrete in shafts subjected to heavy pressures].—Braunkohle, Feb.16, pp. 725-732*; Feb.23, pp. 741-746*; March 8,. pp. 773-779*; $1. Abstract in Techn. Blätter, May11, p. 148; 1000 w; 35c.

Meurer, —. *Beton- und Eisenbetonarbeiten über und unter Tage;* [Concrete and reinforced concrete at the Alma colliery, Gelsenkirchen, above and below ground].—Deu. Beton Ver., Verhandl; read Feb.,1912; pp. —.

Schnatterbeck, Chas. C.—*A Substitute for Timber in Mine Workings;* [Advocates use of concrete].—Mng. Sci., March28,1912; p. 291; 1000 w; 20c.

STOWING OR PACKING

Bucherer, L.—*El relleno hidráulico en las minas de carbon de Europa;* [Hydraulic packing: History and practice in Europe].—Mex. Instn. of Mng. & Met'l'gy, Trans.; Vol. 2. No. 6; 1912; pp. 231-249*; 75c.

In English in Mines & Minerals, June, 1912; p. 641; July, p. 715; 4000 w*; 35c.

Camp, C. L.—*Filling Mine Workings under Railway Bridges with Concrete;* [Scranton, Penn.].—Engg. News, Jan.11,1912; p. 80; 500 w*; 25c.

Hasse, —. *Bekämpfung eines Grubenbrandes im Schachtsicherheitspfeiler durch Spülversatz;* [The fire in the shaft-safety pillars of the Oberhausen colliery, and its control by packing].—Kohle & Erz, Jan.22, 1912, p. 79; 1200 w; 35c.

Julin, J.—*Remblayage par l'eau;* [Waterpacking at the 185-m. level, St. Nicolas colliery, Belgium].—Annales d. Mines (Belgiq.), 1912; No. 1; p. 177; 2500 w*; 95c.

Mehner, H.—*Die Entwässerung und Verfestigung der Kali Endlauge;* [Dewatering and solidification of potash wastes, with reference to possible utilization in mine packing].—Kali, Feb.1,1912; p. 49-54*; 4000 w; 45c.

Seidl, K.—*Das Spülversatzverfahren in Oberschlesien;* [Stowing practice in Upper Silesia].—Kattowitz, 1911; pp. —; $2; (book).

———. *Flushing or Silting Mine Workings;* [Early history in Pennsylvania, 1886-88].—Mines & Minerals. Jan.,1912, p. 321; Feb., p. 385; 2400 w; 65c.

———. *Sand Filling Progress;* [Transvaal].—S. Afr. Mng. Jnl., May4,1912; p. 348; 500 w; 35c.

———. *Tram Cars for Stope Filling;* [Copper Range mines, Painesdale, Mich.].—E. & M. J., March2,1912; p. 443; 200 w*; 25c.

———. *Ueber den Ursprung des Spülversatzes;* [Origin of the stowing system].—Zentral Verbd. Bergbau Betriebsl. Oestr., Zts., Apr.1,1912; p. 198; 1000 w; 35c.

———. *Versuche und Verbesserungen beim Bergwerksbetriebe,* 1911; [Innovations and improvements in mining practice in Prussia in 1911; stope filling].—Zts. f. d. Berg-, H-, & Salinenw., Vol. 60, No. 1; 1912; p. 92-95*; $1.50.

GENERAL; MISCELLANEOUS

Allen, C.—*Spragging the Coal in a Long-Wall Face; Methods and Advantages.*—Sci. & Art of Mng., Jan.6,1912, p. 257; 500 w; 35c.

Brinsmade, R. B.—*Mining Without Timber.*—New York, 1911; 303 pp.; 146 illustr.; $3; (book).

Griffith, Wm.—*Method of Supporting Mine Roofs;* [Blasting down roof, and blasting floor up; then filling back of dam; U. S. Pat. No. 1,004,419].—Mines & Minerals, Dec.,1911, p. 279; Feb.,1912, p. 402; 3600 w*; 65c.

Hall, R. D.—*Permanent Roof Sustension;* [Discusses Griffith patents].—Coal Age, Jan. 20, 1912, p. 481; 1500 w*; 20c.

Howe, M. A.—*Retaining Walls for Earth.*—London, 1911 (5th edition); pp. 181; $1.75 (book).

Lighting; Signaling

ELECTRIC MINE LIGHTS

Courlot, H. and J. Meunier.—*Phénomènes spéciaux accompagnant la rupture des filaments incandescents dans les mélanges d'air et de gaz combustible;* [Studies on the effect of rupture of incandescent filaments in mixtures of air and combustible gases].—Génie Civil, Feb.3,1910; p. 224; 4500 w*; English abstract in Coll'y Guardn., Apr. 26, p. 832; 1000 w; 35c.

Lemaire, Em.—*Inflammation du Grisou par les filaments incandescents des lampes électriques;* [Framéries Experiment Station; Tests on the inflammability of firedamp by the incandescent filaments of electric lamps].—Annales d. Mines (Belgiq.), 1911, No. 2; pp. 321-367*; 90c.

Summary in English in Iron & Coal

Trades Rev., Sept.8,1911, p. 365; 3000 w; 30c. Also in Mng. Engg., Oct.,1911, p. 212; 2500 w*; 30c. Also in Coal Age, Jan.20, 1912, p. 478; 3500 w; 20c.

Also in Spanish in Rev. Minera, Aug.1, 1911, p. 421; 4000 w; 50c.

Milburn, F.—*Underground Lighting with Low-Voltage Metallic-Filament Lamps;* [Read to Asso. of Mng. Electr. Engrs., N. of Engl. branch; abstract].—Iron & Coal Trades Rev., Apr.12,1912; p. 539; Apr.19, p. 604; 4500 w*; 50c. Also in Coll'y Guardn., Apr.12, p. 733; 1800 w; 35c.

———. *A New Portable Electric Safety Lamp;* ["Fors" type].—Coll'y Guardn., Jan. 12,1912, p. 76; 1000 w*; 30c.

———. *Electric Lamps in Mines;* [Phila. & Reading Coal & Iron Co. collieries].—Coal & Age, March30,1912; p. 811; 200 w; 20c.

———. *Entzündung von Gas durch elektrische Lampen;* [Ignition of mine gases by electric lights].—Zentral Verbd. Bergbau Betriebsl. Oestr., Zts., Apr.15,1912; p. 225; 4500 w; 45c.

———. *Portable Electric Lamps for Miners;* [Equipment and maintenance at Lehigh Co.].—Coal Age, Apr.6,1912; p. 836; 2200 w*; 20c.

———. *The Pape Miner's Lamp;* [Electric with Fors battery].—Mng. Engg., Feb., 1912; p. 311; 500 w*; 35c.

ACETYLENE

Auger, —. *Lampe portative à acétylène;* [Auger portable acetylene lamp].—Jnl. du Four Electriq., Apr.1,1912; p. 162; 2100 w*; 35c.

Daniels, J.—*Shields for Acetylene Lamps.* —Coal Age, Apr.20,1912; p. 902; 400 w*; 20c.

Deszenyi, Jul.—*Acetylene Used in Mines Where 6000 Men Are Employed.*—Mining & Engg. World, Jan.13,1912, p. 58; 1500 w; 10c.

Hauser, E.—*Comision del Grisu; Informe sobre la lámpara minera de seguridad, de acetileno, sistema Tombelaine;* [Report of the Spanish firedamp commission on the Tombelaine safety acetylene lamp].—Rev. Minera, Jan.24,1912, p. 38; Feb.1, p. 53; 7500 w*; 50c.

French abstract in Jnl. du Four Electriq., March,1912, p. 112; 1000 w; 35c.

English abstract in Coal Age, June15, p. 1179; 1500 w*; 20c.

Maccoy, Fred.—*Carbide Lamps for Mexican Mines.*—Mex. Mng. Jnl., June,1912; p. 17; 800 w; 25c.

Penkert, R.—*Neuerungen auf dem Gebiete der Acetylenbeleuchtung in Bergwerken;* [Innovations in acetylene lamps for mines].—Kohle u. Erz., Dec.11,1911, p. 1274; 1600 w; 35c.

———. *L'acétylène dans les mines de Meurthe-et-Moselle;* [Use and statistics of acetylene miners' lamps in Meurthe-et-Moselle, France; from Rev. d. Eclairages].—Jnl. du Four Electriq., Apr.15,1912; p. 186; 1200 w; 35c. Also in Echo d. Mines, Apr. 22,1912; p. 490; 1200 w; 35c. Also in Soc. Amicale Ecole Douai, Bull., May10, p. 275; 1200 w; 35c.

SAFETY LAMPS (OIL)

Clifford, Wm.—*An Apparatus for Testing the Power of Safety Lamps.*—Coal & Coke Op., Apr.18,1912; p. 241; 1600 w*; 25c.

Dupuy, J.—*Divers types de lampes de sureté pour être employés dans les mines grisouteuses ou poussiéreuses;* [Decree of Feb.23,1912, enumerating safety lamps (11 of flame type, 5 electric) permissible in fiery or dusty coal mines in France, with descriptions of each lamp].—Annales d. Mines (Paris), April,1912; pp. 186-213*; 75c.

Höh, —. *Die Lampenwirtschaft auf der Schachtanlage Oberschuir der Zeche Consolidation in Gelsenkirchen;* [Organization of lamp-lighting department, Consolidation mine, Gelsenkirchen].—Glückauf, Feb.3, 1912; p. 185; 1100 w*; 50c.

Ledouble, M. O.—*Fermeture des lampes de sureté;* [The closing of mine safety-lamps; Pléchou system modified, and the Wéry unipolar lock].—Annales d. Mines (Belgiq.), Vol. 17, No. 2; 1912; p. 427; 600 w*; 95c.

———. *A propos du rallumeur automatique des lampes de mines;* [The automatic relighting of mine safety lamps].—Echo d. Mines, Dec.18,1911, p. 1306; 500 w; 35c.

———. *Die Sicherheit verschiedener Arten von Sicherheitslampen;* [Comparative safety of various types of safety lamps, luminants, and accessory devices].—Berg- & Hüttenm. Rundschau, March5,1912; p. 115; 3000 w; 35c.

———. *Gas Mixing Apparatus for Safety Lamps; Wolf device.*—Mng. Jnl., June 1,1912; p. 554; 500 w; 35c. Also in Coll'y Guardn, May31,1912; p. 1084; 500 w*; 30c. Also in Iron & Coal Trades Rev., May 31, p. 878; 500 w*; 35c.

———. *Lampe de mine à allumage au ferro-cerium;* [Application of cerium-alloy spark lighters in German benzine mine safety-lamps].—Echo d. Mines, Feb.5,1912; p. 157; 700 w; 35c.

———. *Safety Lamps; Types and Construction; Relative Safety.*—Coal Age, May 11,1912; p. 1019; 750 w; 20c.

GAS TESTING LIGHTS

Briggs, H.—*Testing for Firedamp and Blackdamp by Means of a Safety Lamp;* [Read to Mng. Inst. of Scotland; abstract].—Coll'y Guardn., Feb.23,1912; p. 375; Apr.19, p. 784; 3500 w; 50c. Also in Iron & Coal Trades Rev., Feb.23, p. 285; 1500 w; 30c. Also in Coal & Coke Op., May9, p. 289; 4000 w*; 25c.

Cartwright, F. K.—*A Few Notes on Gas Caps, and a Simple Way of Estimating the Percentage of Firedamp in Mines* [By wick-flame of safety lamp; read to Natnl. Asso. of Coll'y Managers, Yorkshire branch; abstract].—Coll'y Guardn., March15,1912; p. 529; 3500 w*; 30c. Also in Iron & Coal Trades Rev., March15; p. 407; 4000 w*; 30c. Also in Coal & Coke Op., March28, 1912; p. 195; 3600 w; 20c. Also in Mng. Engg., Apr., p. 368; 1000 w; 35c.

M. E.—*Flame Tests for Firedamp.*—Sci. & Art of Mng., Apr.27,1912; p. 444; 1800 w*; 35c.

CANDLES

Maccoy, F.—*The Cost of Illumination by Candles.*—Mex. Mng. Jnl., Jan.,1912, p. 45; 1000 w; 25c.

GENERAL WORKS ON LIGHTING

Watteyne, V.—*L'evolution de l'éclairage dans les mines grisouteuses;* [Evolution of mine lighting in firedamp mines].—Asso. d. Ingrs. Sortis de Liège, Bull., Vol. 35, No. 2; pp. 78-81; $1.

Zern, E. N.—*History of Mine Lighting.*—Coal & Coke Op., Jan.25,1912, p. 52; Feb.1, p. 66; Feb.8, p. 83; Feb.15, p. 102; Feb.22, p. 123; Feb.29, p. 138; March7, p. 150; March14, p. 165; March21, p. 180; March 28, p. 204; April4, p. —; 14,000 w*; $1.20.

"M - - r," —. *Die Beleuchtung in den Schlagwettergruben;* [Lighting in gaseous mines].—Montanist. Rundschau, Dec.16, 1911, p. 1158; 1200 w; 45c.

———. *Versuche und Verbesserungen beim Bergwerksbetriebe,* 1911; [Innovations and improvements in mining practice in Prussia in 1911; lighting].—Zts. f. d. Berg-, H-, & Salinenw., Vol. 60, No. 1; 1912; pp. 120-122; $1.50.

TELEPHONES

Eddy, L. H.—*Drying Air in a Mine Telephone;* [in gold mines of Mother Lode, Cal.].—E. & M. J., June8,1912; p. 127; 600 w; 25c.

Féder, —. *Téléphone de sécurité pour mines grisouteuses;* [Safety telephones for fiery or gassy mines].—Soc. de l'Ind. Minrl. St. Etienne, C-R., Oct.,1911, p. 572; 500 w; 75c.

Heym, W.—*Die Anwendungen der Elektrizität in Grubenbetrieben;* [Applications of electricity in mining; VI; Stamp-mills, fans, telephones, transmission and wiring].—Kali, Erz & Kohle, Jan.15,1912; p. 51; 2800 w; 35c.

Ryba, G.—*Das Rettungswesen im Bergbau;* [Mine Rescue Work; portable telephones for parties of 2 or 3 men].—Zentr. Verb. Bergbau Betriebsleiter Oestr., Zts., Dec.1,1911; p. 506; 2000 w*; 45c.

Wier, E. M.—*Telephone, Signal and Power Lines for Mines;* [read to Coal Mng. Inst. of Amer.; brief abstract].—Coal Age, Dec. 30,1911, p. 377; 500 w; 20c.

———. *Mining Telephones;* [Siemens equipment].—Coll'y Guardn., Feb.2,1912, p. 224; 500 w*; 30c.

SIGNALLING

Bayer, L.—*Signal Device for Mine Cage;* [Continuous signalling from passenger to engineer; U. S. Pat. No. 562,188].—E. & M. J., June1,1912; p. 1076; 600 w*; 25c.

Bolin, G. H.—*Mine Bell Signals in Arizona;* [Arizona state code].—Mng. Sci., June13,1912; p. 515; 500 w*; 20c.

Charlton, T.—*Relay Indicator Signalling in Mines;* [For speedy haulage; read to Asso. of Mng. Electr. Engrs., Yorkshire branch; abstract].—Iron & Coal Trades Rev., Feb.23,1912, p. 300; 2000 w*; 30c.

Curtiss, —. *Bell Signalling and Cable Systems in Shafts at the Crown Mines, Ltd.*—M. & S. P., May18,1912; p. 695; 1000 w*; 20c.

Eadie, —. *Luminous Electric Mine Shaft Signalling.*—Instn. of Mng. Engrs., Trans., Vol. 42; No. 1; pp. 37-41.*

Fox, C. H.—*The Signal System in Use at the Tonopah Belmont Mine, Tonopah, Nevada.*—Mex. Mng. Jnl., Apr.,1912; p. 19; 1600 w*; 35c.

Grether, W. S.—*Electric Signals for Underground Tramways.*—E. & M. J., May25, 1912; p. 1030; 450 w; 25c.

Johnson, J. M.—*A Recording and Signaling Device for Mine Hoists.*—Lake Superior Mng. Inst., Proc., 1911; pp. 88-99*.

Abstract in Iron Trade Rev., Sept.14,1911, p. 466; 750 w*; 20c. Also in Mng. Sci., Sept.14, p. 250; 3200 w*; 20c. Also in Mining & Engg. World, Sept.30, p. 635; 3300 w*; 10c.

McDonald, P. B.—*An Electric Signal Device;* [in hoisting at Negaunee iron mine, Mich.].—E. & M. J., March16,1912; p. 537; 250 w*; 25c

Smith, T. A. W.—*Battery Signalling for* Engrs., N. of Engl. branch].—Iron & Coal Trades Rev., March1,1912, p. 337; 400 w*; 30c. Also in Mining & Engg. World, March 23, p. 662; 500 w*; 10c.

Discussion before Notts. & Derbyshire, S. Wales, etc., branches; in Iron & Coal Trades Rev., May10, p. 764; 2000 w*; 45c.

Theunissen, F.—*Les signalisations electriques dans les puits de mines;* [Electric signalling in mine shafts].—Asso. d. Ingrs. Sortis de Liège, Bull., Vol. 34, No. 2; pp. 251-254; $1.

Turner, F.—*Rutherford Apparatus for Shaft Signalling;* [Read to Asso. of Mng. Electr. Engrs., Notts. & Derbyshire branch; abstract].—Iron & Coal Trades Rev., May 10,1912; p. 764; 500 w*; 45c.

Wilson, P.—*Signalling in Sinking Shafts and in Winding Shafts.*—Sci. & Art of Mng., Apr.27,1912; p. 449; 500 w*; 35c.

———. *Signalling;* [Discussion of papers by Beadsmore, Charlton and Smith before Asso. of Mng. Electr. Engrs.; Lancs., etc., branch].—Iron & Coal Trades Rev., March 15,1912; p. 415; 3000 w; 30c.

Accounts and Bookkeeping

Allen, A. W.—*Statement of Construction Costs.*—M. & S. P., May18,1912; p. 702; 1000 w*; 20c.

Allen, A. W.—*The Estimation of Battery Tonnage.*—M. & S. P., Feb.24,1912; p. 308; 2000 w; 20c.

Allen, A. W.—*The Statement of Working Costs;* [In milling gold ores].—M. & S. P., Feb.3,1912; p. 204; 1000 w; charts; 20c.

Beissel, —. *Einführung der Kartenkontrolle für die gesamte Belegschaft der Grube Eschweiler-Reserve bei Nothberg;* [Card-index time-keeping system at the Eschweiler-Reserve colliery, Prussia].—Glückauf, May4,1912; p. 710-714*; 50c.

Best, J. W.—*Cost Accounts, With Special Reference to Those of an Engineer and Ironfounder.*—London, 1911 (2d edition); $2 (book).

Blümel.—*Zur Frage der Abschreibungen wegen Substanzverminderung;* [The setting apart of funds for depreciation and amortization, and bearing on the income-tax law in Germany].—Glückauf, Apr.13,1912; p. 596-602; 50c.

Botsford, H. L.—*A Filing System Suggested for Use of Engineers.*—Mining & Engg. World, Jan.6,1912; p. 13; 4500 w*; 10c.

Burnham, N. H.—*The Finance of a Mine;* [Discusses keeping of development records intelligible to non-expert investors].—Mng. Mag., May,1911, p. 361; June, p. 443; July, p. 39; Aug., p. 125; Sept., p. 209; Oct., p. 280; Dec., p. 444; 15,000 w*; $2.00.

Davidson, W. A.—*Mine Registration and Checking.*—Coal Age, Apr.27,1912; p. 934; 1200 w*; 20c.

Emmons, N. H., 2d.—*Concise Method of Showing Ore-Reserves.*—Amer. Inst. Mng. Engrs., Trans.; Feb.,1912; 6 pp; 1000 w*; 50c. Reprint in E. & M. J., March9,1912, p. 505, 25c.

Fowler, S. S.—*Costs and Cost-Conditions at Bluebell Mine, B. C.*—Canadian Mng. Inst., Bull. 18, Feb.,1912; p. 3-12; $1.20.

Garcia, J. A.—*Cost Sheets and Daily Reports.*—Coal Age, Jan.13,1912, p. 451; 1000 w; charts; 20c.

Hague, Wm.—*The Basis of Calculating Mining Tonnage Costs;* [Tonnage vs. cu. ft.

and tonnage mined vs tonnage milled].—E. & M. J., Feb.3,1912; p. 247; 1500 w; 25c.

Hill, F. C.—*Cost Engineering.*—Colo. School of Mines Mag., Apr.,1912; p. 153; 1500 w; 50c.

Johnson, J. M.—*A Recording and Signaling Device for Mine Hoists.*—Lake Superior Mng. Inst., Proc., 1911; pp. 88-99*.
Abstract in Iron Trade Rev., Sept.14,1911, p. 466; 750 w*; 20c. Also in Mng. Sci., Sept.14, p. 250; 3200 w*; 20c. Also in Mining & Engg. World, Sept.30, p. 635; 3300 w*; 10c.

Langton, J.—*A Method of Calculating Sinking Funds, and a Table of Values for Ordinary Periods and Rates of Interest;* [Discussion of Dilworth's paper of March. 1910].—Amer. Inst. Mng. Engrs., Bull. 60, Dec.,1911, p. 1039; 500 w; tables; $1.15.

Leake, P. D.—*Depreciation and Wasting Assets.*—London, 1911; 200 pp; $3.50 (book).

Nold, S. E.—*Essential Features of a Foundry Cost System.*—Iron Trade Rev., May16,1912; p. 1055; 3500 w*; 20c.

Olson, G. L.—*Time-Keeping System and Labor Distribution at the Newport Mine.*—Lake Superior Mng. Inst., Proc., 1911; pp. 127-143*.

Platt, Jas. M.—*A Graphic Method for Facilitating Valuation of Ore Reserves;* [Calculations for irregular sampling].—Mex. Instn. Mng. & Met'l'gy, Trans.; Vol. 2, No. 6; 1912; p. 220; 750 w*; 75c.

Prill, A.—*Systematizing Annual Reports to Stockholders.*—Mining & Engg. World, Feb.24,1912; p. 465; 2000 w*; 10c.

Richardson, W. D.—*Cost-keeping System;* [at Brantford Pressed Brick Co.].—Brick, Jan.15,1912; p. 79-83*; 20c.

Rolfe, F. P.—*Illogical Precision in Mine Reports;* [Favors use of round vs. exact figures in ore reserves].—Instn. of Mng. & Met'l'gy, Bull. 92, May,1912; p. 1-7; 50c.

Scholz, C.—*Form of Cost Sheet;* [Consolidated Indiana Coal Co.].—Coal Age, March2,1912; p. 687; 1000 w; chart; 20c.

Semple, C. C.—*The Basis of Calculating Tonnage Costs;* [Discusses Hague's paper].—E. & M. J., Feb.10,1912; p. 298; 750 w; 25c.

Sheldon, T. H.—*Notes on Mine Accounting;* [Abstract; read to Cripple Creek Mng. & Metgl. Soc.].—E. & M. J., Dec.23,1911, p. 1231; 2600 w; 25c.

Smith, C. W. — *Mining Cost Chart;* [Graphic determination of present and future profits, and influence of tonnage on costs].—Mines & Minerals, Apr.,1912; p. 518; 1000 w*; 35c.

Vivian, Jas. D.—*Time-Keeping System of the Crystal Falls Iron Mining Co.*—Lake Superior Mng. Inst., Proc., 1911; pp. 70-76. Abstract in Mines & Minerals, Nov.,1911, p. 241; 1000 w; tables; 35c.

Webster, E. H.—*Cyanide Mill Metallurgical Records;* [Keeping of balance sheets].—E. & M. J., Apr.20,1912; p. 791; 3200 w*; 25c.

———. *"Financial Costs" That Are Frequently Underestimated.*—Engg. & Contractg., March6,1912; p. 255; 750 w; 35c.

———. *Method of Cost Keeping in German Foundries.*—Castings, Jan.,1912, p. 104; 1500 w; 1400 w; 20c.

———. *Phantom Profits;* [Net vs. actual vs. operating vs. distributed profits in gold mining by leading companies].—Mng. Mag., Apr.,1912; p. 255; 2000 w; 45c.

———. *The Question of Costs;* [Efficiency in cost accounting; methods of Buffalo Brick Co.].—Brick, Apr.1,1912; p. 321-328*; 20c.

———. *Versuche und Verbesserungen beim Bergwerksbetriebe,* 1911; [Innovations and improvements in mining practice in Prussia in 1911; card-index time-keeping system at Louisenthal, Saar].—Zts. f. d. Berg-, H-, & Salinenw., Vol. 60, No. 1; 1912; pp. 131-143*; $1.50.

Ore Reserves: Estimation and Valuation.

Holloway, G. T.—*Notes on the Valuation of Ores and Minerals, and on Metallurgical Calculations.*—Instn. of Mng. & Met'l'gy, Bull. 90; March,1912; pp. 16; chart; 50c.

Kreutz, Wm.—*Wertschätzung von Bergwerken;* [The valuation of mines; Supplement: System of valuation and allotments of participants in the Rhine-Westphalia Coal Syndicate].—Cologne; 1912; 31 pp.; $1; (pamphlet).

Krusch, P.—*Die Untersuchung und Bewertung von Erzlagerstätten;* [Examination and Evaluation of Ore Deposits].—Stuttgart, 1911 (2d edition); pp. xxiv, 569] 125 figs; $5.50 (book).

Penman, A. P.—*Estimation of Ore Reserves.*—E. & M. J., May25,1912; p. 1021; 1200 w; 25c.

Probert, F. H., and R. B. Earling.—*The Estimation of Ore Reserves;* [Practice at Ray Central Mines, Ariz.].—E. & M. J., Dec.16,1911, p. 1179; 1800 w*; 25c.
Abstract in Mines & Methods, Jan.,1912; p. 389; 1800 w*; 25c.

Rowland, R. H.—*Estimating Irregular Areas.*—E. & M. J., March23,1912; p. 587; 1000 w*; 25c.

Shaw, S. F.—*Data of the World's Principal Mines;* [Annual tonnage, profits, dividends, costs per ton, ore reserves].—E. & M. J., Jan.13,1912, p. 133; 3 pp.; tables; 25c.

Webber, M., R. B. Hoffmann and C. S. Herzig.—*The Finance of a Mine;* [Discuss "future possibilities" in ore reserves, and their evaluing; discussion of Burnham's paper].—Mng. Mag., March,1912; p. 213; 3500 w; 45c.

Mine: Miscellaneous and General

Austin, W. L.—*Leaching Applied to Copper Ore; XIV: Leaching Rock Without Mining.*—Mines & Methods, Jan.,1912; p. 381; 4600 w; 35c.

Bréchignac, J.—*La Mine aux Mineurs de Monthieux, Loire;* [The Miners' Co-Operative Mine at Monthieux, Loire; Its Rise and Failure; doctorate thesis].—Lyon, France, 1911; pp. —. Brief review in Soc. de l'Ind. Minrl. St. Etienne, C-R., Sept.,1911, p. 555; 400 w; 75c.

Finlay, J. R.—*The Relation Between Mining and Civilization;* [Commencement address, Mo. School of Mines, May31,1912; abstract].—Mining & Engg. World, June15, 1912; p. 1239; 3000 w; 10c. Also in M. & S. P., June15, p. 820; 3500 w; 20c.

Hoskin, A. J.—*Considerations Before Opening Mine;* [Legal matters, topography, transportation, labor, supplies, extent of property, etc].—Mines & Minerals, June, 1912; p. 682; 3000 w; 35c.

Howe, M. A.—*Retaining Walls for Earth.*—London, 1911 (5th edition); pp. —; $1.75 (book).

Jackman, A. N.—*The Mining Yearbook,* 1911.—London,1912; pp. —; (book).

Lakes, A., Sr.—*Effects of Landslides in Mining Regions.*—Mining & Engg. World, Apr.20,1912; p. 861; 2200 w*; 10c.

Lakes, A., Sr.—*Snowslides in Mining Districts in British Columbia.*—Mining & Engg. World, March2,1912; p. 505; 2500 w*; 10c.

Leprince-Ringuet, F.—*Sur la production, la distribution et l'emploi d'électricité par les charbonnages;* [The production, distribution and uses of electricity by coal mines, chiefly in France, England and Germany].—Paris, 1912; 136 pp; 49 figs; $2.50 (book).

Loring, E. A.—*Contract System;* [Reviews successful use in Western Australia].—Mng. Mag., Jan.,1912, p. 49; 800 w; 45c.

Meurer, —. *Beton- und Eisenbetonarbeiten über und unter Tage;* [Concrete and reinforced concrete at the Alma colliery, Gelsenkirchen, above and below ground].—Deu. Beton Ver., Verhandl; read Feb.,1912; pp. —.

Pryor, T.—*Makeshifts in Mining;* [Gold mines near Popoyan, Colombia; wax candles, home made belting, etc.].—Mng. Mag., March,1912; p. 204; 1000 w*; 35c.

Rolfe, F. P.—*Illogical Precision in Mine Reports;* [Favors use of round vs. exact figures in ore reserves].—Instn. of Mng. & Met'l'gy, Bull. 92, May,1912; p. 1-7; 50c.

Steele, H.—*Cost of Mining a Ton of Ore;* [at large low-cost copper, gold and diamond mines].—E. & M. J., May25,1912; p. 1023; 1600 w; 25c.

Williams, A. F.—*The Kimberley System of Rock Handling;* [Read to S. Afr. Inst. of Engrs; author's reply to discussion].—S. Afr. Mng. Jnl., May4,1912; p. 366; 2500 w; 35c.

Wyman, T. B.—*The Relations of the Mining Industry to the Prevention of Forest Fires.*—Lake Superior Mng. Inst., Proc., 1911; pp. 211-217.

Young, Geo. J.—*The Position on the Comstock;* [Reviews recent mining and milling treatment and costs].—E. & M. J., Jan.20,1912, p. 167; 4500 w*; 25c.

Mining & Met'g'l Soc. of America.—*Paralysis of Mining Districts; the Causes and Remedies Therefor.*—M. & M. Soc. of Amer., Bull. 46, March30,1912; p. 39-48; 50c.

S. T. A.—*Seismic Unrest and Falls of Roof.*—Coal Age, March16,1912; p. 751; 1000 w; 20c.

———. *Annuaire de la Chambre syndicale française des mines métalliques* 1911-1912; [Directory and yearbook of the French Chamber of Mines (metal mines, and including Algiers and Tunis), 1911-1912].—Paris, 1912; 742 pp.; $2.25; (book).

———. *Deep Coal Mine Shafts, and Deep Drill Holes.*—Mines & Minerals, May, 1912; p. 598; 600 w; table; 35c.

———. *Deepest Workings of the Central Rand.*—S. Afr. Mng. Jnl., Feb.24,1912; p. 897; 1500 w; 35c.

———. *Earthquakes and Mine Explosions;* [Resumé of discussion before Internatnl. Asso. of Seismology].—Coal Age, March9,1912; p. 702; 1400 w; 20c.

———. *New Seismometers and Artificial Earthquakes;* [Describes experiment station for mines at Bochum, Germany].—Engg., Jan.5,1912; p. 7; 2500 w*; 35c.

———. *Personal der Kgl. Preussischen Bergverwaltung am 1 April,* 1912; [Personnel of the royal Prussian Bureau of Mines, Apr.1,1912].—Zts. f. d. Berg-, H-, & Salinenw., Vol. 60, No. 1; 1912; pp. 1-34; $1.50.

TEXT BOOKS ON MINING; GENERAL WORKS

Brinsmade, R. B.—*Mining Without Timber.*—New York, 1911; 303 pp.; 146 illustr.; $3; (book).

Clark, D.—*Australian Mining and Metallurgy.*—Melbourne, 1911; 600 pp*; $6.50 (book).

Fallières, A. (President of France).—*Nouveau Règlement Général sur l'Exploitation des Mines de Combustibles en France;* [Text of new law governing coal mining in France].—Journal Official, Aug.26,1911; 18,000 w.

Reprint in Echo d. Mines, Aug. 31, (Supplement); 18,000 w; 35c. Also in Soc. Amicale d...Mineurs de Douai, Bull., Sept.25, pp. 514-622; Oct.10, p. 649-; Oct.25, p. 691-; 65c. Also in Rev. Noire, Sept.17, Oct.1, Oct. 15, Oct.29; 90c. Also in Soc. de l'Ind. Minrl. St. Etienne, Bull., Oct.,1911, pp. 367-410; 75c. Also in Annales d. Mines (Belgiq.), Vol. 16, No. 4, 1911; $1.00.

Holmes, Jos.—*First Annual Report of the Director of the Bureau of Mines to the Secretary of the Interior for the Fiscal Year Ended June* 30, 1911.—Washington, D. C. (U. S. Bur. Mines); 1912; 57 pp*; 20c.

Homann, Labas, and others.—*Handbuch für Eisenbetonbau, Band VII;* [Manual of Reinforced Concrete Engineering; Vol. VII, Railroads, Tunnels and Mining; Chapter V, by A. Nowak, on Tunnels, Tunnel Ventilation and Protective Galleries; Chapter VII, by B. Nast, Concrete and reinforced concrete in shafts, roadways, workings and above ground].—Berlin, 1912; (2d addition); pp. —; 1093 figs.; $8; (book).

Kerr, G. L.—*Elementary Coal Mining.*—London, 1912 (3d edition); pp. ——*; (book).

Ketchum, M. S.—*The Design of Mine Structures;* [Headworks, hoisting and stresses; coal tipples, washers, and breakers; roof trusses and frame structures; bins and retaining walls; cranes and girders; miscellaneous mine structures].—New York, 1912; 459 pp*; $4 (book).

Leprince-Ringuet, F.—*Les progrès techniques et les tendances de l'exploitation du bassin houiller du Pas-de-Calais;* [Technical progress and tendencies in coal mining in the Pas-de-Calais basin, France].—Soc. de l'Ind. Minrl. St. Etienne, C-R., Sept., 1911, p. 503-506; 1600 w; 75c.

Niess, Dr.—*Tagebau- und Tiefbaubetrieb beim Braunkohlenbergbau;* [Methods in surface and underground lignite mining].—Halle, 1911; pp. —; (book).

Peel, Rob.—*An Elementary Text-Book of Coal Mining.*—London, 1911 (15th edition); 386 pp*; $1.50 (book).

Power, F. D.—*Coalfields and Collieries of Australia.*—Melbourne, 1912; 412 pp*; $7 (book).

———. *Berg- und Hütten-Kalendar für das Jahr,* 1912; [Miners' Pocket Manual for 1912; Huyssen's, Vol. 57].—Essen, 1912, pp. —; $2; (book).

———. *Reprint of Coal Mines Act,* 1911 [British; 1 & 2, Geo. 5, Ch. 50].—Sci. & Art of Mng., Suppl., Jan.20,1912, pp. xv; 35c.

Ore Sampling

See under Chemistry in Metallurgy and Chemistry.

Electricity in Mine, etc.

For electricity, compressed air, steam, etc., in mines and mining, milling, etc., see under "Power and Machinery."

CHAPTER IX.—MINE AND MINING (2)†

HAULAGE; HOISTING; CABLES

Cables

CABLES

Baird, D.—*Wire Ropes as Applied to Mining;* [Winding and sinking cables; read to Mng. Inst. of Scotland; abstract].—Coll'y Guardn., Oct.20,1911; p. 771; 2000 w; 30c. Also in Iron & Coal Trades Rev., Oct.20; p. 651; 1800 w; 30c. Also in Mng. Engg., Nov.; p. 226; 1600 w; 35c. Also in S. Afr. Mng. Jnl., Nov.11; p. 335; 1600 w; 35c. Also in Canadian Engr., Nov.16; p. 562; 1600 w; 25c. Also in Mines & Minerals, Feb., 1912; p. 404; 3000 w; 35c. Also in Queensl. Govt. Mng. Jnl., Feb., p. 56; 1500 w; 35c.

Dietrich, G. H.—*Seilbrüche und ihre Ursachen;* [Cable fractures and their causes].—Kohle & Erz, Jan.15,1912, p. 54; 1200 w; 35c.

Grundy, Jas.—*Principal Precautions to Obtain Maximum Wear Out of Winding Ropes Combined with Safety.*—Sci. & Art of Mng., Feb.3,1912; p. 306; 1000 w; 35c.

Herbst, Fr.—*Ergebnisse der preussischen Statistiken der Schachtförderseile für das Jahr,* 1910; [Review of Prussian statistics on hoisting cables in 1910].—Glückauf, March2,1912; p. 333-346*; March9, pp. 377-388*; March16, pp. 424-427*; 95c.

Johnson, F. L.—*Wire Rope Splicing.*—Power, Jan.30, p. 143; 600 w*; 50c. Also in Coal Age, March23,1912; p. 776; 600 w*; 20c. Reprint in E. & M. J., Apr.20, p. 784; 25c.

Ledouble, M. O.—*Cables métalliques, nettoyage et graissage;* [Cleaning and greasing metal hoisting cables at Monceau-Fontaine colliery, Belgium].—Annales d. Mines (Belgiq.), Vol. 17, No. 2; 1912; p. 429; 750 w*; 95c.

Minto, J.—*The Various Types of Metal Winding Ropes, and Their Material.*—Sci. & Art of Mng., Dec.23,1911, p. 233; 1000 w; 35c.

Nelson, A.—*Frequency of Annealing Requisite for Winding-Chains.*—Sci. & Art of Mng., Jan.20,1912, p. 283; 750 w*; 35c.

Palmer, Wm. P.—*Improvement of Quality in Steel Wire Manufacture;* [Improvements in practice of American Steel & Wire Co.].—Iron Age, Jan.4,1912; p. 41; 2000 w; 65c.

Rice, C. T.—*A Guy Rope Tightener.*—E. & M. J., Apr.27,1912; p. 832; 150 w*; 25c.

Smallwood, J. C.—*Rope Brakes, Construction and Design.*—Power, May28,1912; p. 754; 4000 w*; 15c.

Speer, —. *Die Sicherheit der Förderseile;* [Studies on the safety factor of hoisting cables].—Glückauf, May11, pp. 737-747*; May18, pp. 781-788*; May25, pp. 824-830*; Junel, pp. —*; $1.25.

Verrill, A. H.—*Knots, Splices and Rope-work.*—New York, 1912; 102 pp*; $1; (book).

Voit, St.—*Die Verwendung der Drahtseile im Petroleum-Plunger Betrieb;* [Specifications, testing and use of steel cables for boring by the Canadian system].—Petroleum, Feb.21,1912; p. 537; 3500 w*; 50c.

———. *Calculating Formula for Size of Rope in Deep Shaft.*—Coal Age, Jan.20,1912, p. 491; 500 w; 20c.

———. *Effect of Coal Tar, Treated with Slaked Lime, on Wire Rope.*—Coal Age, Dec.23,1911, p. 355; 750 w; 20c.

———. *Wire Rope Splicing.*—Well Drillers' News, April,1912; p. 6; 500 w*; 20c.

Haulage

ANIMAL HAULAGE

Aston, F. J.—*Conditions Where Manual and Horse Haulage Can Be Usefully and Economically Employed.*—Sci. & Art of Mng., March16,1912; p. 383; 1000 w*; 35c.

Bestwick, R.—*Care and Management of Pit Ponies;* [Read to S. Staff. Mng. Schools Soc.; abstract].—Iron & Coal Trades Rev., Jan.12,1912, p. 253; 2000 w; 30c. Also in Mng. Engg., Feb., p. 309; 1500 w; 35c.

Davies, M. J.—*The Care of Mine Mules.*—Coal Age, May11,1912; p. 1021; 1800 w; 20c.

Hodges, C. B.—*Air, Electric and Mule Haulage.*—Coal Age, Feb.3,1912; p. 541; 2500 w*; 20c.

Randolph, B. S.—*Mine Stable Management.*—Mines & Minerals, Apr.,1912; p. 534; 1500 w; 35c.

———. *Azoturia;* [Discusses this disease of mules].—Coal Age, Jan.27,1912, p. 511; 500 w; 20c.

———. *Care and Treatment of Pit Horses;* [New British regulations].—Sci. & Art of Mng., Feb.3,1912; p. 295; 500 w; 35c.

———. *Face Guard for Mining Stock;* [Eye-guards for horses, mules, etc.].—Coal Age, Feb.10,1912; p. 578; 600 w*; 20c.

FACE CONVEYORS

Blau, E.—*Maschinelle Streckenförderungen;* [Mechanical haulage and face-conveyors].—Kohle u. Erz, Dec.18,1911, p. 1290; Dec.25, p. 1313; 3000 w*; 50c.

Also published as separate pamphlet, Kaffowitz, 1912; 20 pp.; 13 figs.; 65c.

Gerke, A.—*Die maschinelle Abbauförderung in ihrer Bedeutung für die Eisenindustrie;* [Mechanical face conveyors in mines, especially in Silesian iron mines].—Oberschles. Berg- u. Hüttenm. Ver., Zts.; Dec., 1911, p. 542; 5600 w*; 45c.

Lindner, —. *Förderrinnen;* [Conveyors].—Fördertechnik, Feb.,1912; p. 31-34*; March, pp. —; $1.

Ridsdale, H. H.—*Coal Face Conveyors;* [Reviews principles and various types of conveyors; read to S. Staff & Warwicks. Inst. of Mng. Engrs.; abstract].—Iron & Coal Trades Rev., Dec.22,1911; p. 1012; 3500 w; 30c. Also in Coll'y Guardn., Dec. 29, p. 1286; 6000 w*; 30c. Also in Coal Age, Feb.24, p. 643; 4000 w*; 20c.

Tornow, Dr.—*Ueber Schüttelrutschen im Bergwerksbetriebe;* [Grizzlies, shaking tables and trough conveyors in mining practice].—Techn. Blätter, March30,1912; p. 97; Apr.5, p. 105; Apr.13, p. 113; 7000 w*; 75c.

Wendriner, —. *Erfahrungen bei der maschinellen Streckenförderung auf den Steinkohlenbergwerken Oberschlesiens;* [Experience with combustion and electric locomotives and cable haulage in Upper Silesian coal mines].—Zts. f.d. Berg-, H-, & Salinenwesen, Vol. 59, No. 5; 1911; pp. 673-694*; $1.15.

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†Including "Haulage and Hoisting"; "Sanitation, Safety, Rescue"; "Accidents"; "Labor."

LOCOMOTIVES.

(STEAM, ELECTRIC, COMPRESSED AIR, GASOLINE, ETC.

Van Brussel, J. B.—*The Otto Internal-Combustion Locomotive;* [At Germanic mines, Gelsenkirchen, Germany].—E. & M. J., March30,1912; p. 657; 1000 w; 25c.

Bütow and Dobbelstein, —. *Vergleichende Untersuchungen an Grubenlokomotiven;* [Comparative tests of various types of mine locomotives; (1) Compressed-air, —Schwartzkopff, Borsig, Meyer, Ruhrthaler types; (2) Electric storage-battery and single-phase alternating current].—Glückauf, March23,1912; pp. 461-468*; March 30, pp. 501-511*; (2) Apr.27, pp. 661-667*; May4, pp. 701-710*; $1.50.

French translation in Rev. Noire, July7, p. 313; July21; Aug.4; 65c.

Fourmarier, —. *Traction par locomotive à benzine;* [Haulage by benzine locomotive at Horloz colliery, Belgium, and cost comparison with haulage by mules].—Annales d. Mines (Belgiq.), Vol. 17, No. 2; 1912; p. 439; 2000 w*; 95c.

Gilbert, G. H.; L. I. Wightman; and W. L. Saunders.—*The Subways and Tunnels of New York; Methods and Costs.*—New York; 1912; pp. 372*; $4; (book).

Guérin, —. *Locomotives à air comprimé, système Meyer;* [Use of Meyer compressed-air locomotive at Levant de Flénu colliery, Belgium].—Annales d. Mines (Belgiq.), Vol. 17, No. 2; 1912; p. 413; 2500 w*; 95c.

King, A. F.—*The Use of Gasoline Motors in Mines;* [Read to W. Va. Coal Mng. Inst., June.1912; abstract].—Coal & Coke Op., June6,1912; p. 355; 1600 w; 25c. Also in Coal Age, June22, p. 1217; 1600 w; 20c.

Laird, Jas. R.—*Electricity Applied to the Scottish Shale Oil Industry;* [Chiefly in haulage; read to Asso. of Mng. Electr. Engrs.; W. of Scotland branch].—Iron & Coal Trades Rev., March15,1912; p. 412; 2500 w*; 30c.

Leerberg, N.—*The Coming System of Mine Haulage;* [Discusses requirements for efficiency in electric motor haulage].—Iowa Engr., May,1912; p. 287; 1200 w*; 30c.

Mountain, W. C.—*Electric Haulages in Mines;* [Read to Asso. of Mng. Electr. Engrs.; N. of Engl. branch].—Iron & Coal Trades Rev., March1,1912; p. 334; 5000 w*; 30c.

Otte, —. *Versuche mit Motorlokomotiven auf der Grube Dechen im Saarrevier;* [Tests of naptha locomotive haulage at the Dechen colliery in the Prussian state mining district of the Saar].—Zts. f. d. Berg-, H-, & Salinenw., Vol. 59, No. 5; 1911; pp. 739-768*; $1.15.

Paehr, —. *Erfahrungen mit Grubenlokomotiven beim Steinkohlenbergbau im Oberbergamtsbezirk Dortmund;* [Practical experiences with mine locomotives in the Dortmund district; benzine-benzol, electric (alternating, direct, and storage-battery), compressed air].—Zts. f. d. Berg-, H-, & Salinenwesen, Vol. 59, No. 5, 1911; pp. 647-672*; $1.15.

Perkins, F. C.—*Gasoline Locomotives for Underground Haulage.*—Mining & Engg. World. June15,1912; p. 1251; 1400 w*; 10c.

Siemens, G.—*Die elektrische Lokomotivförderung mit einphasigem Wechselstrom auf der Zeche Rosenblumendelle;* [Electric haulage engine for single-phase alternating current at the Rosenblumendelle colliery, Germany].—Glückauf, Dec.9,1911, p. 1905-1911*; Dec.16, p. 1941-1948*; 75c.

Sperlingk, H., and C. Jarrijon.—*Les locomotives à essence pour mines;* [Gasoline locomotives for mines and the question of atmospheric vitiation by fumes].—Echo d. Mines, Jan.18,1912, p. 77; Jan.25, p. 106; 750 w; 50c.

Stapenhorst.—*A Compressor Plant for Mine Haulage;* [Translated from "Glückauf"].—Coal Age, Jan.13,1912, p. 438; 1000 w*; 20c.

Taite, Chas. D.—*Lancashire Electric Power Co.'s System and its Application to Lancashire Collieries;* [Includes discussion of electricity vs. compressed air for haulage; read to Manchester Geol. & Mng. Soc.].—Iron & Coal Trades Rev., March 15, 1912; p. 410; March22, p. 455; 6900 w*; 50c. Also in Coll'y Guardn., March22,1912; p. 579; 6000 w*; 30c.

Thunblom, A.—*Tryckluftlokomotiv för malmtransport;* [Compressed air mine locomotive at the Grängesberg iron mines].—Jernkontor. Annaler, Nov.15,1911; pp. 917-920*; 45c.

Walker, S. F.—*Electrical Machinery for Coal Mines;* [Shunt-wound continuous motor vs. 3-phase induction].—Coal Age, March16,1912; p. 376; 2700 w; 20c.

———. 1000 *HP. Crude-Oil Compressed-Air Locomotive.*—Mng. & Engg. Rev., March,1912; p. 271; 500 w; 35c.

———. *A Relay Controller for Electric Mine Haulage;* [Laurence, Scott Co., English design].—Coal Age, Jan.13,1912, p. 453; 800 w*; 20c.

———. *A Storage-Battery Electric Locomotive for Tunnel Haulage in the Under-City Tunnel, Catskill Aqueduct, N. Y.*—Engg. & Contractg., June5,1912; p. 628; 1000 w*; 20c.

———. *Electric Haulage for Mines;* [British Thomson-Houston Co. types and their principles].—Iron & Coal Trades Rev., Jan.5,1912, p. 20; 1800 w*; 30c.

———. *Exhaust Steam Compressing Air to 100 Atmospheres;* [for haulage at Bergbau colliery, Neu-Essen].—Compr. Air Mag., March,1912; p. 6352; 1200 w*; 25c.

———. *Gas Locomotives for Mines;* [Results with Otto engines].—Coal Age, Jan.27,1912, p. 521; 500 w; 20c.

———. *Gewicht und Ausrüstung von Grubenlokomotiven und deren Berechnung;* [Determining the weight and equipment of mine locomotives].—El. Kraft Betr. & Bahnen, 1912, No. 6, pp. 113-116; 75c.

———. *Locomotive à air comprimé Schwartzkopf;* [The Schwartzkopf compressed-air locomotive].—Rev. Noire, Jan.7, 1912, u. 12; 500 w*; 35c.

In Italian in Ingr. Ferroviaria, Jan.31, 1912, p. 24; 500 w*; 35c.

———. *Locomotives de mines à moteur à explosion système Turcat & Méry;* [Turcat-Méry gasoline mine locomotives].—Rev. Noire, Feb.4,1912; p. 54; 2000 w*; 35c.

———. *Locomotive for Sharp Curves;* [Garratt engine on Tasmanian N. E. Dundas line, 2-ft. gauge].—Mines and Methods, March,1912; p. 443; 500 w*; 20c.

———. *Maple Block Coal Co., Des Moines, Iowa;* [Mine and power plant; single motor haulage system].—Electr. Mng., April,1912; p. 29-42*; 20c.

———. *Storage Battery Electric Locomotives for Tunnel Haulage;* [General Electric type on Catskill Aqueduct, N. Y.—Coal Age, May11,1912; p. 1013; 150 w*; 20c. Also in E. & M. J., May 11, p. 942; 150 w*; 25c. Also in Engg. & Contractg., June5, p. 628; 1000 w*; 20c.

———. *Storage Battery Locomotives;*

[General Electric Co. types].—Coal Age, Feb.3,1912; p. 543; 1000 w*; 20c. Also in Coal & Coke Op., Feb.15, p. 112; 1000 w*; 25c.

———. *Novel Gasoline Locomotives;* [Plymouth Motor Truck Co.].—Iron Age, Jan.18,1912; p. 191; 500 w*; 30c.

———. *Testing Gasoline Mine Locomotives.*—Mines & Minerals, Jan.,1912; p. 341; 700 w*; 35c.

———. *Ueber Motorlokomotiven;* [Benzine and liquid-fuel haulage locomotives in German clay pits, quarries, etc].—Ton-Industrie Ztg., Apr.18,1912; p. 654; 1600 w*; 35c.

TRACK; CARS; ACCESSORIES

Buffum, F. D.—*Steel Mine Ties.*—Coal Age, May11,1912; p. 1017; 750 w*; 20c.

Burt, R. O.—*A Speedy Coal Dump.*—Coal Age, Jan.6,1912, p. 429; 500 w; 20c.

Cartlidge, O.—*Track Arrangement for Shaft Bottoms.*—Mines & Minerals, Jan., 1912; p. 336; 1200 w*; 35c.

Evans, A. W.—*Safety Device for Slope Car.*—Coal Age, June8,1912; p. 1142; 300 w*; 20c.

Evans, D. T.—*Steel versus Wooden Mine Cars;* [abstract; read to Kanawha Coal Operators' Asso.].—Coal Age, Dec.30,1911, p. 379; 2400 w; 20c.

Fischer, F. L.—*Shaft Station Safety Gates.*—E. & M. J., June15,1912; p. 1175; 500 w*; 25c.

Hamilton, G. W.—*Determination of Frictional Resistance of Mine Cars;* [From Electric Jnl., Nov.,1911].—Coal & Coke Op., May16,1912; p. 305; 1800 w; 25c.

Köbrich, —. *Die Eichung der Fördergefässe im Bergwerksbetriebe;* [The German law of April 1, controlling the measuring of weights in mine cars, cages, buckets, etc., as affecting wages].—Glückauf, May27,1912; p. 667-677; 50c.

Lindrooth, A. E.—*A Successful Type of Rotary Dump;* [at Con. Fuel Co., collieries, Hiawatha, Utah].—Coal Age, March16, 1912; p. 739; 500 w*; 20c

Rice, C. T.—*Shaft Station in Inclined Footwall Shaft;* [Describes junctions in flat-dipping shafts of Michigan copper belt].—E. & M. J., Jan.27,1912, p. 206; 300 w*; 25c.

Saelier, L.—*Shaft Bottom at the Arenberg Mine;* [From Rev. Univers. d. Mines, Aug.,1904].—Mines & Minerals, Feb.,1912; p. 413; 750 w*; 35c.

Shurick, A. T.—*Colliery Mine-Car Construction.*—Coal Age, May11,1912; p. 1008; 2400 w*; 20c.

Stewart, A. W. J.—*Taper of Face of Car Wheels.*—E. & M. J., Jan.20,1912, p. 159; 300 w; 25c.

Woodruff, G. B.—*Lubrication of Roller-Bearing Mine Cars.*—E. & M. J., May25, 1912; p. 1046; 600 w; 25c.

———. *Air-Driven Side-Dump Car.*—E. & M. J., May11,1912; p. 932; 500 w*; 25c.

———. *An Endurance Test of Roller Bearings for Mine Car Wheels.*—Coal Age, Dec.30,1911, p. 377; 800 w*; 20c.

———. *An Improved Form of Haulage Grip.*—Iron & Coal Trades Rev., Feb.2, 1912, p. 172; 500 w*; 30c.

———. *Blocking Tunnel Cars;* [Automatic gate for mine cars at base of shaft].—Engg. Record, May4,1912; p. 493; 200 w; 25c.

———. *Calumet and Hecla Ore Cars.*—E. & M. J., Jan.13,1912, p. 110; 750 w*; 25c.

———. *Cradle for Dumping Mine Cars;* [in Michigan copper mines].—E. & M. J., March16,1912; p. 539; 400 w*; 25c.

———. *Drainage of Gravity Planes.*—E. & M. J., Jan.20,1912, p. 160; 300 w*; 25c.

———. *Joplin Bucket Cars;* [Used in Missouri lead-zinc districts].—E. & M. J., May18,1912; p. 979; 750 w*; 25c.

———. *Mine-Car Door Latch.*—Mines & Minerals, June,1912; p. 648; 400 w*; 35c.

———. *Mine Car Lubrication.*—Coal Age, March9,1912; p. 710; 1000 w; 20c.

———. *Wagonrangiereinrichtungen mit endlosem, ständig umlaufenden Rangierseil;* [Haulage device for endless cable].—Kohleninteressent, Jan.1,1912; p. 10; 1500 w*; 35c.

SIGNALLING

See under "Lighting and Signalling."

HAULAGE, MISCELLANEOUS

Blau, E.—*Bodenständige Förderungen mit ortfestem Antrieb;* [Ground haulage systems for mines, with stationary drive].—Bergbau, Feb.29,1912; p. 124; 1800 w; 35c.

Bright, G. G.—*Weight and Equipment of Mine Locomotives;* [Electrical].—El. Jnl., No. 11, 1911; pp. 986-998*; 50c.

Kopplin, —. *Gefährdung der Schiessarbeit mit elektrischer Zündung durch den elektrischen Grubenlokomotivbetrieb;* [Dangers of electric blasting in mines using electric haulage].—Glückauf, May25,1912; p. 821-824*; 50c.

Mitchard, F.—*Coal Mines Act Regulations Governing Use of Jig Brows or Self-Acting Inclines.*—Sci. & Art of Mng., March30, 1912; p. 398; 500 w; 35c.

Nelson, A.—*Methods of Working with Cut-Chain Haulage.*—Sci. & Art of Mng., Feb.3,1912; p. 307; 1000 w]; 35c.

Steel, A. A.—*Spiral for Raising Rope to Knuckled Sheave;* [at slope tipples].—Mines & Minerals, April,1912; p. 542; 1000 w*; 35c.

Thompson, A. E.—*Practical Coal Haulage;* [Abstract of lecture before Victor-American Fuel Co.].—Mines & Minerals. June,1912; p. 650; 800 w; 35c.

Wilson, P.—*Conducting Endless Rope Haulage Around Curves.*—Sci. & Art of Mng., March30,1912; p. 404; 500 w*; 35c.

———. *Haulage Systems;* [Brief notes on the various systems; advantages and disadvantages].—Coal Age, Jan.27,1912, p. 520; 1000 w; 20c.

———. *Versuche und Verbesserungen beim Bergwerksbetriebe,* 1911; [Innovations and improvements in mining practice in Prussia in 1911; face, roadway and inclined-plane haulage].—Zts. f. d. Berg-, H-, & Salinenw., Vol. 60, No. 1; 1912; pp. 105-111*; $1.50.

Hoisting

HEAD-WORKS; CARS; SHAFT EQUIPMENT

Bauer, K. — *Sicherheitsvorrichtungen gegen Seilbruch bei Schachtförderungen und Aufzügen;* [Safety devices against the breaking of hoisting cables].—Bauwelt, No. 98, 1911; pp. 29-32*; 75c.

Botsford, H. L.—*Safety Catch for Cage;* [Describes several types].—E. & M. J., March30,1912; p. 636; 1100 w*; 25c.

Botsford, H. L.—*Hiawatha Mine Cage and Safety Catch.*—E. & M. J., Apr.6,1912; p. 688; 500 w*; 25c.

Botsford, H. L.—*A Light Mine Cage.*—

E. & M. J., Apr.13,1912; p. 736; 250 w*; 25c.

Dessalles, —. *Rehaussement du châssis à molettes;* [Heightening a headframe and headhouse without disturbing hoisting operations].—Annales d. Mines (Belgiq.), 1912, No. 1; p. 157; 1000 w*; 95c.

Ebeling, Dr.—*Automatische Hängebankförderung und Schachtbedienung auf den Fürstlich Plessischen Steinkohlenbergwerken Brade und Emanuelssegen bei Kattowitz O-S;* [Automatic shaft-collar hoisting and shaft service at the Brade and Emanuelssegen collieries, Kattowitz, Upper Silesia].—Oberschles. Berg- & Hüttenm. Ver., Zts., Feb.,1912; pp. 45-59*; 45c.
Reprint in Kohle & Erz, May27, pp. 554-567*; June3, pp. 578-593*; 50c.

Elwes, H. G.—*Headframes for Small Shafts.*—Mex. Mng. Jnl., Jan.,1912, p. 33; 800 w*; 25c.

Eddy, L. H.—*Breaking of the Gold Cliff Hoist Cable;* [Angels Camp, Calaveras county, Cal.].—E. & M. J., May11,1912; p. 952; 750 w*; 25c.

Fischer, F. L.—*Shaft Station Safety Gates.*—E. & M. J., June15,1912; p. 1175; 500 w*; 25c.

Hall, R. W.—*Notes on a Time Saving Apparatus in Connection with the Decking of Cages at the Bottom of the Shaft at Leasingthorne Colliery;* [Read to Natnl. Asso. of Coll'y Managers; abstract].—Iron & Coal Trades Rev., Dec.22,1911, p. 1024; 1000 w*; 30c.

Hutchinson, F.—*Description and Sketch of Good Pit-Head Frame Suitable for Large Output.*—Sci. & Art of Mng., March2,1912; p. 356; 1000 w*; 35c.

Hutchinson, F.—*The Choice of Winding Drums for Deep Drum-Hoists.*—Sci. & Art of Mng., Jan.20,1912, p. 284; 750 w*; 35c.

Jenkin, A.—*Reasons for and Method of Counterbalancing a Winding Rope in Deep Shafts.*—Sci. & Art of Mng., Dec.23,1911, p. 234; 600 w; 35c.

Ives, L. E.—*Safety Devices for Hoisting through Inclines.*—E. & M. J., March9,1912, p. 485; 1200 w; 25c.

Lechat, V.—*Machine d'extraction électrique;* [Electric hoist at the Kessales colliery, Belgium].—Annales d. Mines (Belg.), 1912, No. 1; p. 168; 1200 w*; 95c.

Leerberg, N.—*Power Requirements for Electric Hoists;* [In Iowa coal fields].—Iowa Engr., May,1912; p. 324-329; 1500 w*; 30c.

Low, V. F. S.—*Impressions Gathered While Traveling;* [A. E. G. works at Berlin; Ilgner hoist near Carnap, Germany].—Australian Mng. Standd., Feb.15,1912; p. 151; Feb.22, p. 175; 5000 w*; 50c.

McDonald, P. B.—*Steel Headframe at American Iron Mine, Diorite, Mich.*—Mining & Engg. World, Feb.10,1912; p. 358; 500 w*; 10c.

McDonald, P. B.—*Sheaves for Balanced Hoisting.*—E. & M. J., Jan.20,1912, p. 158; 100 w; 25c.

Nelson, A.—*An Efficient Brake for a Large Winding Engine and Where It Should be Placed.*—Sci. & Art of Mng., March30, 1912; p. 402; 1200 w*; 35c.

Nirtl, G.—*Eine neue, vom Förderseil unabhängige Fangvorrichtung für Förderschalen;* [New safety catch for hoisting cages, acting independently of the cable].—Zentral Verbd. Bergbau Betriebsl. Oestr., Zts., Feb. 1,1912; p. 72; 1200 w*; 45c.
English abstract in Coal Age, March16, p. 746; 1000 w*; 20c.

Rassbach, E. C.—*The Koepe Pulley Winder.*—Iron & Coal Trades Rev., March 1,1912; p. 326; 2000 w; 30c. Reprint in Mng. Engg., April, p. 29; 35c. Also in Mechl. World, Apr.26, p. 195; 35c.

Rice, C. T.—*Joplin Hoisting-Bucket Hooks.*—E. & M. J., June1,1912; p. 1075; 400 w*; 25c.

Rice, C. T.—*Safety Appliances in Inclines;* [Runaway prevention at Gagnon inclined shaft, Butte, Mont.].—E. & M. J., Apr.27,1912; p. 826; 1200 w; 25c.

Rice, C. T.—*A Mine Chute Gate;* [Removable gates in dry-wall chutes, Baltic copper mine, Mich.].—E. & M. J., Feb.17, 1912; p. 351; 600 w*; 25c.

Rice, C. T.—*Shaft Station in Inclined Footwall Shaft;* [Describes junctions in flat-dipping shafts of Michigan copper belt].—E. & M. J., Jan.27,1912, p. 206; 300 w*; 25c.

Severy, C. L.—*Landing Chair for Cage.*—E. & M. J., Feb.3,1912; p. 257; 500 w*; 25c.

Spicer, H. N.—*Some Kalgoorlie Hoisting-Bucket Arrangements.*—Mines & Minerals, Apr.,1912; p. 572; 600 w*; 35c.

Steel, A. A.—*Gate for the Top of a Coal Mine Shaft.*—Mines & Minerals, May,1912; p. 598; 200 w*; 35c.

Wallace, H. V.—*Making Mine Ladders;* [Practice and equipment at Nueva Luz 2000 ft. shaft, Mexico].—M. & S. P., March 2,1912; p. 347; 500 w*; 15c.

Wallace, R. B.—*A Safety Gate for Cages.*—E. & M. J., Jan.20,1912, p. 161; 150 w*; 25c.

Wright, F. C.—*Automatic Landing Chair for Mine Cages and Skips.*—Mng. Sct., Feb. 22, 1912; p. 195; 600 w*; 20c. Reprinted in Mines & Methods, March,1912; p. 432*; 20c.

Zulch, W. G.—*El Paso Shaft, Cripple Creek, Colo.;* [Hoisting equipment].—Mines & Minerals, March,1912; p. 488; 500 w*; 35c.

———. *A Copper Range, Michigan, Man Car.*—E. & M. J., June8,1912; p. 1126; 300 w*; 25c.

———. *Blocking Tunnel Cars;* [Automatic gate for mine cars at base of shaft].—Engg. Record, May4,1912; p. 493; 200 w; 25c.

———. *A New Safety Catch for Mine Shafts;* ["Tenax" device].—Coll'y Guardn., Jan.19,1912, p. 128; 1000 w*; 30c.

———. *Safety Crossheads for Hoisting Buckets.*—E. & M. J., March23,1912; p. 588; 500 w*; 25c.

———. *Enlarging a Headframe* [Tonopah, Nev.].—E. & M. J., Dec.23,1911, p. 1215; 200 w*; 25c.

———. *The Construction of Head Frames in Lake Superior Region.*—Mining & Engg. World, March2,1912; p. 510; 300 w*; 10c.

———. *A Six-Ton Skip-Loading Device;* [at Rand Collieries gold mine].—E. & M. J., Feb.10,1912; p. 301; 500 w*; 25c.

———. *Aufsatzvorrichtung für Förderschalen;* [Landing device for hoisting cages].—Oestr. Ton Industrie Ztg., No. 25, 1911; pp. 397-8*; 75c.

———. *Landing Chair for Skips in Inclines.*—E. & M. J., March23,1912; p. 589; 500 w*; 25c.

———. *Detaching Hooks for Heavy Loads and Quick Winding;* ["King's" hook].—Iron & Coal Trades Rev., March22,1912; p. 456; 500 w*; 30c.

———. *Joplin Bucket Cars;* [Used in

Missouri lead-zinc districts].—E. & M. J., May18,1912; p. 979; 750 w*; 25c.

———. *Motor Trucks for Hauling Blasted Rock from City Aqueduct Tunnel, N. Y.;* [Loading shaft skips].—Engg. Record, March30,1912; p. 350; 1200 w*; 20c.

———. *Pont-plate-forme de communication entre plan incliné et voies chassantes de galeries de mines;* [Draw-bridge platform connecting inclined planes with movable mine haulage ways or ore bins; Giloteaux system].—Rev. Noire, March17,1912; p. 129; 1200 w*; 35c.

———. *Roller Frame for Inclined Shafts;* [In Michigan copper district].—E. & M. J., Jan.20,1912, p. 157; 400 w*; 25c.

———. *Skip-Loading Device at Osceola Mine, Mich.*—E. & M. J., March2,1912, p. 446; 400 w*; 25c.

———. *Testing the Safety Devices on Mining Cages;* [Trips to prevent descent of cage in case of cable breakage].—Engg. Record, June8,1912; p. 622; 500 w*; 25c.

———. *The Franklin 10-Ton Skip;* [Houghton, Mich.].—E. & M. J., March30, 1912; p. 635; 500 w*; 25c.

———. *The Mohawk Skip* [at Mohawk copper mine, Mich.].—E. & M. J., Dec.23, 1911, p. 1215; 500 w*; 25c.

ELECTRIC HOISTING

Armstrong, F. H.—*Electrical Operation of the Plants of the Penn Iron Mining Co., Vulcan, Mich.*—Lake Superior Mng. Inst., Proc., 1911; pp. 244-250*.

Barnes, J. J.—*Hoisting By Electricity;* [General considerations].—Mines & Minerals, Feb.,1912; p. 416; 1000 w; 35c.

Blau, E.—*Die Entwicklung der elektrisch betriebenen Fördermaschine;* [The evolution of the electric-driven hoist].—Bergbau, May23,1912; p. 293; May30, p. 305; 3500 w; 50c.

Cheney, H. W.—*Electrical Control of a Large Mine Hoist.*—Amer. Inst. Electr. Engrs., Proc.; March,1912; pp. 215-229*; $1.15. Abstract in Electrician, May24, p. 285; 3000 w; 35c.

Edwards, Geo. E.—*The Ilgner System in Electric Hoisting Operations.*—Mining & Engg. World, May11,1912; p. 989; 3500 w*; 10c.

Gascoyne, R.—*Electrical Hoisting Plants on the Rand;* [Ward-Leonard vs. 3-phase].—Mining & Engg. World, Feb.10,1912; p. 342; 3000 w; tables; 10c.

Gascoyne, R.—*Electrical Power in the Transvaal;* [Chiefly power plants and hoisting].—Cassier's Mag., Feb.,1912; p. 93-116; 6000 w*; 35c.

Haar, S.—*The Control of Electric Mine Hoists.*—Gen. Electric Rev., May,1912; 7 pp*; 35c. Abstract in Engg. Mag., July, p. 604; 1600 w*; 35c.

Heather, H. J. S.—*Control of Induction Motor Hoists;* [Read to British Instn. of Electr. Engrs., May,1911; abstract].—S. Afr. Mng. Jnl., June3,1911, p. 585; June24, p. 701; 6000 w*; 50c. Also in Electrician, Nov.10,1911, p. 177; 1600 w*; 35c. Also in E. & M. J., March23,1912; p. 589; 1500 w*; 25c.

Heather, H. J. S.—*Comparison of Winding Costs;* [Ward-Leonard vs. 3-phase systems; remarks on Renner's paper before S. Afr. Inst. Electr. Engrs.].—S. Afr. Mng. Engrs., Dec.2,1911; 2000 w; 35c.

Hudspeth, H. M.—*Electric Hoisting in Upper Silesia;* [Read to N. of Engl. Inst. of Mng. & Mechl. Engrs.; abstract].—Coal Age, March23,1912; p. 780; 1000 w*; 20c.

Hunter, A. D.—*Electric Winding;* [Thury vs. Ilgner and Ward-Leonard control].—Iron & Coal Trades Rev., Apr.19,1912; p. 608; 500 w; 35c.

Ilgner, Karl.—*Ilgner Anlagen und ihre Wirtschaftlichkeit;* [The Ilgner hoisting system and its industrial efficiency; read to Oestr. Ingr. & Archt. Ver., Elektrotechnik section]. — Elektrotechnik & Maschbau, March24,1912; p. 256; 2000 w; 35c.

McDonald, P. B.—*Electric Hoist at Negaunee Mine;* [Cleveland Cliffs Co. iron mine, Mich.].—E. & M. J., Feb.24,1912; p. 395; 750 w*; 25c.

Meyer, G.—*Methods for Economical Speed Regulation of 3-Phase Motors;* [From Elektr. Kraftbetriebe & Bahnen; transl. in abstract].—Electrician, Feb.2,1912; p. 671; Feb.9, p. —; 5000 w*; 50c.

Rektenwald, J. — *Elektrisch betriebene Fördermaschinen;* [Industrial economy and efficiency of modern electric hoists].—Berg- & Hüttenm. Rundschau, March20,1912; p. 130; 2500 w; 35c.

Rice, S.—*Progress in the Coeur d'Alene District, Idaho;* [Includes notes on economic electric hoisting].—Mining & Engg. World, June8,1912; p. 1185; 2500 w*; 10c.

Schulz, E.—*Elektrisch betriebene Hauptschacht-Fördermaschinen;* [Electric hoists for central hoisting shafts in Germany and France; from A-E-G Ztg.].—Erzbergbau, Dec.15,1911, p. 330; 2400 w*; 35c. Also in Montanist. Rundschau, Dec.16, p. 1149; 2700 w*; 45c.

Strauss, A.—*Elektrischbetriebene Hauptschacht-Fördermaschine;* [Notes on electric hoists].—Bayer. Ind. & Gewerbebl., 1911, No. 47; pp. 461-465*; 75c.

Tupper, C. A.—*Electrical Mine Hoists and Their Control.*—Mining & Engg. World, March30,1912; p. 699; Apr.6, p. 751; 7500 w*; 20c.

Viannay, —. *Nouvelle machine d'extraction à courant monophasé;* [A new electric single-phase hoist].—Soc. de l'Ind. Minrl. St. Etienne, C-R., Oct.,1911, p. 569; 1000 w; 75c.

Walker, S. F.—*Electrical Machinery for Coal Mines;* [Shunt-wound continuous motor vs. 3-phase induction].—Coal Age, March16,1912; p. 736; 2700 w; 20c.

Wille, H.—*Versuche an einer elektrisch betriebenen Hauptschachtförderanlage mit Schwungradausgleich;* [Tests of an electric mine hoisting plant with flywheel equalizer].—Vr. Deu. Ingr., Zts.. March2,1912; pp. 333-344*; 75c.

English abstract by L. Crouch in Engg. Rev., June15, p. 487; 1000 w*; 35c.

Williams-Ellis, M. I.—*A New Type of Induction Motor;* [Cascade single and multi-speed motor].—S. Afr. Inst. of Engrs., Jnl; April,1912; 14 pp.*; 65c. Abstract in S. Afr. Engg., May,1912; p. 89; June; 7000 w*; 50c.

Wood, B.—*Electrically-Driven Winding Engines;* [Read to Victorian Inst. of Electr. Engrs.].—Australian Mng. Standd., Nov.30, 1911, p. 553; Dec.7, p. 579; Dec.14, p. 600; 7000 w*; 65c.

———. *Electric Power Underground;* [Underground hoist at New Heriot mine, Rand].—Salt Lake Mng. Rev., Jan.30,1912; p. 27; 1000 w*; 25c. Also in Mng. Sci., Feb.8, p. 155; 1000 w; 20c. Also in S. Afr. Engg., Nov.,1911, p. 82; 500 w*; 35c.

———. *Bericht über die Versuche mit der elektrischen Fördermaschine auf dem Maureschacht der Heinitzgrube bei Beuthen, O-S;* [Report on tests of the electric hoist at the Maure shaft of the Hein-

itz mine near Beuthen, Upper Silesia].—Oberschles. Elektrotechn. Ver., Mitttlngn., July5,1911; pp. 197-201*; $1.00.

———. *Electric Hoist at Calumet & Arizona, Bisbee, Ariz.*—E. & M. J., Jan.20, 1912, p. 162; 1000 w*; 25c. Also in Mines & Minerals, March, p. 485; 1000 w*; 35c.

———. *Electric Sinking Hoist at Cinderella Deep Consol. Mine.*—S. Afr. Engg., Dec.,1911, p. 103; 1000 w*; 35c. Also in E. & M. J., Jan.27,1912; p. 205; 1000 w; 25c. Also in Mines & Minerals, May, p. 624; 1200 w; 35c. Also in Mex. Mng. Jnl., Junel, p. 42; 1200 w*; 25c.

———. *Electrical Winding Hoists in the Transvaal;* [Ward-Leonard vs. 3-Phase system].—Australian Mng. Standd., Feb.22, 1912; p. 173; 1800 w; 35c.

———. *Electric Winding Gear at the West Rand Consol. Gold Mines.*—Engnrg., Dec.8,1911, p. 760; 1200 w*; 35c. Also in Electrician, Jan.5, p. 557; 1000 w*; 35c. Also in El. Rev. (London), March8, p. 388; 2000 w*; 35c. Also in S. Afr. Mng. Jnl., March16, p. 73; 1000 w*; 35c.

———. *Elektrisch betriebene Hauptschachtfördermaschine;* [A. E. G. Ilgner system of electric hoisting].—A. E. G. Ztg., No. 5, 1911; pp. 1-6*; 50c.

———. *Hoisting Plant at the Champion Reef.*—Mng. Mag., Jan.,1912, p. 67; 500 w*; 45c.

———. *New Method of Electric Winding at the Auchincruive Pits of Messrs. Wm. Baird & Co.*—Iron & Coal Trades Rev., Apr. 5,1912; p. 534; 2000 w*; 35c.

———. *Winders at the Rand Collieries.*—S. Afr. Mng. Jnl., Apr.27,1912; p. 310; 1000 w*; 35c.

STEAM HOISTING

Dampfkessel Ueberwachungs Ver. Essen. *—Abnahmeversuch an einer Dampffördermaschine;* [Tests of a steam hoisting engine at the Westerholt colliery, Westphalia].—Glückauf, Feb.17,1912, p. 269; 1000 w*; 45c.

Freyberg, M.—*Die Gleichstromdampfmaschine und ihre Gestaltung als Fördermaschine;* [The unidirectional steam engine and its application to mine hoists].—Kali, Apr.15,1912; p. 188; 5000 w*; 45c.

Gentebrück, —. *Die Fahrtregler der Dampfördermaschinen mit besonderer Berücksichtigung des Systems Schönfeld;* [Controlling systems for steam mine hoists with special reference to the Schönfeld system].—Techn. Blätter, March16,1912; p. 81; 2500 w*; 35c.

Heys, W.—*Steam Expansion Gear Suitable for Winding Engines.*—Sci. & Art of Mng., March16,1912; p. 382; 600 w*; 35c.

Morison, D. B.—*Steam Regenerative Accumulators;* [Special reference to British mine hoists; read to Instn. of Engrs. & Shipbuilders in Scotland].—Iron & Coal Trades Rev., March22,1912; p. 443; 5000 w*; 30c. Also in Coll'y Guardn., March29, p. 629; 2500 w*; 35c.

Rogers, W. O.—*Winding Engines of the Ashley Planes,* [Wilkes-Barre, Pa.].—Power, April2,1912; p. 456; 1800 w*; 15c.

Rogers, W. O.—*"Tom Hunter, Hoisting Engineer";* [Experiences with various hoisting engines and plants].—Power, Dec.26, 1911, p. 948; Feb.6, p. 185; March5, p. 325; Apr.16, p. 542; May7, p. 653; June25, p. 892; 9500 w*; 75c.

Schönfeld, Georg. — *Sicherheitsvorrichtungen für Dampffördermaschinen;* [Schönfeld controller and other safety equipment for steam hoisting engines; read to Ver. Deu. Ingr., Pfalz-Saarbrück section; abstract].—S. W. Deu. Industrie Ztg., May 21,1912; p. 284; 3000 w*; 35c.

Schönfeld, —. *Selbsttätige Geschwindigkeitsregelung an Dampffördermaschinen;* [Automatic speed regulator and control for steam hoisting engines].—Glückauf, Feb. 24,1912, p. 300; 2000 w*; 45c.

Walker, S. F.—*Notes on New Machinery for South Africa; Gott's Controlling Gear for Steam and Electrical Winding Apparatus.*—S. Afr. Engg., Jan.,1912; p. 9; 1200 w*; 35c.

Wallichs, A.—*Die neuere Entwickelung der Fördermaschinenantriebe und der Sicherheitsvorrichtungen;* [Newer developments in the driving of electric and steam hoists and hoist-safety appliances].—Ver. Deu. Ingr., Zts., Dec.2,1911, p. 2002; Dec. 9, p. —; Apr.13,1912; p. 599; 6000 w*; $1. pp. 25-31; March, pp. 49-53*; May, pp. 97-100*; $1.50.

Wintermeyer, —. *Sicherheitsvorrichtungen (Fahrtregler) für Dampffördermaschinen mit mechanischer Regelung;* [Safety devices (controllers) for steam hoists].—Kohle & Erz, May6,1912; p. 434; 5000 w*; 35c. Also in Dingler's Polytechn. Jnl., May 25, pp. 325-327; June8, pp. —*; 75c.

———. *Hoisting Engine Repair Job;* [Due to imperfect condensate control].—Power, Jan.23,1912; p. 110; 500 w*; 15c.

———. *New Large Hoisting Engine;* [Montreal Mining Co. at Hurley, Wis., on Gogebic iron range].—Iron Age, May2,1912; p. 1092; 500 w*; 30c.

COMPRESSED-AIR HOISTS

Nordberg, B. V.—*Mine Hoisting Systems Compared;* [Steam vs. air vs. electricity].—E. & M. J., May18,1912; p. 993; May25, p. 1035; 9,000 w; 40c.

Pauly, K. A.—*Electric Motors vs. Compressed-Air Engines for Driving Deep-Mine Hoists.*—Amer. Inst. Mng. Engrs., Bull. 60, 975; 1000 w; 30c.

Abstract in Engg. & Contractg., Jan.3, 1912; p. 7; 4000 w*; 25c.

COMBUSTION-ENGINE HOISTING

Chorlton, A. E. L.—*Colliery Winding by Gas Engines;* [Extracts from paper on Gas-Engines for Collieries read to Midland Inst. of Mng. etc. Engrs.].—Iron & Coal Trades Rev., Dec.8, p. 932; Dec.15, p. 609; 1000 w*; 50c. Also in Mechl. World, Dec. 22,1911, p. 296; 1000 w*; 35c. Also in Coll'y Guardn., Dec.22, p. 1227; Dec.29, p. 1299; 1000 w*; 50c. Also in Mining & Engg. World, Jan.20,1912, p. 112; 1000 w*; 10c. Also in Coal Age, Apr.13, p. 876; May4, p. 973; 5000 w*; 30c. Also in Mng. Engg., May, p. 55; June, p. 78; 4000 w; 50c.

TEXT BOOKS AND GENERAL WORKS ON HOISTING

Höing, Sch.—*Ueber Schachtförderung aus grosser Teufe beim Steinkohlenbergbau im Oberbergamtsbezirk Dortmund;* [Equipment, practice and improvements in hoisting from great depths in the Dortmund district, Germany].—Zts. f. d. Berg-, H.- & Salinenw., Vol. 60, No. 1; 1912; pp. 28-56*; $1.50.

Ketchum, M. S.—*The Design of Mine Structures;* [Part I: Headworks, hoisting and stresses].—New York, 1912; 459 pp*; $4 (book).

Möhrle, Th.—*Fördmittel bei der Schacht-*

förderung; [Hoisting Equipment for Mine Shafts; cables, headwheels, landings, and automatic loading and unloading; with chapter on cages and hooks by Wohlstadt]. —Kattowitz and Breslau, 1912; pp. —; 194 figures; $5.50 (book).

Möhrle, Th.—*Das Fördergerust, seine Entwickelung, Berechnung und Konstruktion;* [The headframe, its historical development, computation and construction].—Kattowitz, 1912; pp. —; 145 figs; $3.50 (book).

Moldenhauer, E.—*Wirtschaftliche Schachtförderung aus grossen Teufen;* [The problem of economic hoisting from great depths, and comparison of steam vs. electricity. — Glückauf, Dec.16,1911, p. 1948-1961; Dec.23, pp. 1981-1992*; 75c. Abstract of a dissertation, Essen, 1911; 38 pp.; 37 figs.; $1.

Wallichs, A.—*Die Berechnung der Hauptschacht Fördermaschinen;* [Computations and specifications for central-shaft hoisting engines].—Fördertechnik, Feb.,1912; pp. 25-31; March, pp. —; $1.

Verein Deutscher Ingenieure.—*Untersuchung an elektrisch und mit Dampf betriebenen Fördermaschinen;* [Tests of electric vs. steam driven hoists for power consumption].—Glückauf, Oct.21,1911, pp. 1629-1640*; Oct.28, pp. 1675-1681*; Nov. 4, pp. 1709-1724*; Nov.11, pp. 1755-1764*; Nov.18, pp. 1797-1801; Nov.25, pp. 1832-1838*; Dec.30, pp. 2021-2031*; $2. Also published separately, Berlin, 1911; pp. —; $1.

Abstract in Elektrotechnik & Maschinenbau, Jan.28,1912; p. 83; 500 w; tables; 45c.

English abstract in Coll'y Guardn., March1, p. 426; March15, p. 532; 2500 w; 50c.

SIGNALLING; OVER-WINDING; SAFETY

See also "Headworks; Shaft Equipment."

Bayer, L.—*Signal Device for Mine Cage;* [Continuous signalling from passenger to engineer; U. S. Pat. No. 562,188].—E. & M. J., June1,1912; p. 1076; 600 w*; 25c.

Beach, —. *The Shaw-Hemsworth Overwinder.*—Instn. Mng. Engrs., Trans., Vol. 42, No. 1; pp. 92-98.*

Black, J.—*Overwinding Prevention and Controlling Gear for Colliery Winding Engines, with a Description of the Inglis Controller;* [read to Mng. Inst. of Scotland].—Iron & Coal Trades Rev., Apr.19,1912; p. 611; 500 w; 35c.

Bolin, G. H.—*Mine Bell Signals in Arizona;* [Arizona state code].—Mng. Sci., June13,1912; p. 515; 500 w*; 20c.

Brown, Myles.—*Adequate Brakes for Winding Engines;* ["A. B. S." brake].—Sci. & Art of Mng., Apr.27,1912; p. 442; 1000 w*; 35c.

Curtiss, —. *Bell Signalling and Cable Systems in Shafts at the Crown Mines, Ltd.*—M. & S. P., May18,1912; p. 695; 1000 w*; 20c.

Eadis, —. *Luminous Electric Mine Shaft Signalling.*—Instn. of Mng. Engrs., Trans., Vol. 42; No. 1; pp. 37-41.*

Fox, C. H.—*The Signal System in Use at the Tonopah Belmont Mine, Tonopah, Nevada.*—Mex. Mng. Jnl., Apr.,1912; p. 19; 1600 w*; 35c.

Johnson, J. M.—*A Recording and Signaling Device for Mine Hoists.*—Lake Superior Mng. Inst., Proc., 1911; pp. 88-99*.

Abstract in Iron Trade Rev., Sept.14,1911, p. 466; 750 w*; 20c. Also in Mng. Sci., Sept.14, p. 250; 3200 w*; 10c. Also in Mining & Engg. World, Sept.30, p. 635; 3300 w*; 10c.

McDonald, P. B.—*An Electric Signal Device;* [in hoisting at Negaunee iron mine, Mich.].—E. & M. J., March16,1912; p. 537; 250 w*; 25c.

Paul, J.—*Overwinding Prevention Gear for Colliery Winding Engines as Fitted at the Lochgelly Iron & Steel Co.'s Mary Pit;* [Read to Mng. Inst. of Scotland; abstract].—Iron & Coal Trades Rev., Dec.15,1911; p. 975; 1000 w; 30c. Also in Coll'y Guardn., Dec.22, p. 1235; Feb.23, 1912; p. 375; 1500 w*; 50c. Also in E. & M. J., Apr.13, p. 736; 2000 w*; 25c.

Strachan, J.—*Prevention of Overwinding With Special Reference to the Visor Controller;* [Read to Natnl. Asso. of Coll'y Managers, Midland branch].—Iron & Coal Trades Rev., Apr.12,1912; p. 561; 4500 w*; 35c.

Theunissen, F.—*Les signalisatione electriques dans les puits de mines;* [Electric signalling in mine shafts].—Asso. d. Ingrs. Sortis de Liège, Bull: Vol. 34, No. 2; pp. 251-254; $1.

Turner, F.—*Rutherford Apparatus for Shaft Signalling;* [Read to Asso. of Mng. Electr. Engrs., Notts. & Derbyshire branch; abstract].—Iron & Coal Trades Rev., May 10,1912; p. 764; 500 w*; 45c.

Wilson, P.—*Signalling in Sinking Shafts and in Winding Shafts.*—Sci. & Art of Mng., Apr.27,1912; p. 449; 500 w*; 35c.

———. *An Interesting Overwind Preventer;* [Landale system of Douglas & Grant, Ltd., at Valley Field colliery of Fife Coal Co.].—Coal Age, May18,1912; p. 1037; 1500 w*; 20c.

———. *Signalling;* [Discussion of papers by Beadsmore, Charlton and Smith before Asso. of Mng. Electr. Engrs.; Lancs., etc., branch].—Iron & Coal Trades Rev., March 15,1912; p. 415; 300 w; 30c.

———. *The Whitmore Brake and Overwind Prevention Gear.*—Coll'y Guardn., Dec.8,1911, p. 1125; 1000 w; 30c. Also in Iron & Coal Trades Rev., Feb.16,1912, p. 257; 500 w*; 30c. Also in E. & M. J., March2, p. 445; 1200 w*; 25c.

———. *Wallace's Overwinding, Overspeeding, and Indicating Gear.*—Coll'y Guardn., Apr.2*,1912; p. 637; 500 w*; 35c.

MISCELLANEOUS IN HOISTING

Black, G. J. F.—*Time Velocity Diagrams from Winding Engines.*—Mechl. World, May10,1912; p. 226; 750 w*; 35c.

Collins, F. W.—*Graphic Solution of Skip Loads.*—E. & M. J., May18,1912; p. 982; 250 w*; 25c.

Daniels, Jos.—*Combined Gravity Plane and Hoist; Roslyn coal field, Washington].*—Coal Abe, Apr.6,1912; p. 843; 500 w*; 20c.

Desenfans, G.—*Trucs par la descente des long bois dans le puits;* [Trucks for lowering large timbers into mines; equipment and practice at Escouffiaux colliery, Belgium].—Annales d. Mines (Bengiq.), Vol. 17, No. 2; 1912; p. 406; 750 w*; 95c.

Edwards, Geo. E.—*Mining Practice in Pioneer District of Iron Range;* [Hoisting and mining practice south of Menominee river in Wisconsin].—Mining & Engg. World, Apr.27,1912; p. 907; 2000 w*; 10c.

Herberts.—*Betriebsbedingungen für Personenaufzüge;* [Requirements in hoisting passengers in Germany].—Fördertechnik, April,1912; 4 pp*; 65c.

Heys, W.—*The Whiting System of Hoist-*

ing or Winding; [From great depths; from Sci. & Art of Mng.].—Mining & Engg. World, Apr.27,1912; p. 911; 1800 w; 10c.

Morgans, H. M.—*Notes on the Operation of Two Winding Engines;* [Karlik tachograph records of water hoists].—Instn. of Mng. & Met'l'gy, Bull. 88. Jan.,1912; 5 pp*; 50c. (Discussion), Bull. 89, Feb., p. 17-19; 50c.

Abstract in Coll'y Guardn., Jan.26,1912; p. 177; 1000 w*; 30c.

Worcester, S. A.—*An Underground Hoisting Station;* [Colorado].—E. & M. J., May 25,1912; p. 1027; 750 w*; 25c.

———. *Maximum Stress in Winding.*—Mechl. World, Apr.19,1912; p. 190; Apr.26, p. 202; 1000 w; 50c.

———. *Versuche und Verbesserungen beim Bergwerksbetriebe,* 1911; [Innovations and improvements in mining practice in Prussia in 1911; inclined-plane and shaft hoisting].—Zts. f. d. Berg-, H-, & Salinenw., Vol. 60, No. 1; 1912; pp. 108-116*; $1.50.

Cableways; Trestles; Inclines

Boag, F. A.—*Vertical Curves to Prevent Derailment.*—Coal Age, March16,1912; p. 752; 1000 w*; 20c.

Butler, J. E.—*Coal Developments at Stearns, Ky.;* [Includes notes on aerial cableway spanning 550-ft. river].—Mines & Minerals, March,1912, p. 481; 1600 w*; 35c.

Daniels, Jos.—*Combined Gravity Plane and Hoist; Roslyn coal field, Washington*].—Coal Age, Apr.6,1912; p. 843; 500 w*; 20c.

Feldhaus, F. M.—*Zur Geschichte der Drahtseil Schwebebahnen;* [Historical development of aerial cableways].—Berlin, 1911; 48 pp.*; 50c.; (pamphlet).

von Hanffstengel, —. *Ungewöhnliche Drahtseilbahnen;* [Some unusual types of aerial cableways].—Ver. Deu. Ingr., Zts., Apr.20,1912; p. 634-639*; Apr.27, pp. —; $1.

Heys, W.—*Precautions on Self-Acting Inclines to Prevent Mine Wagons from Running Away.*—Sci. & Art of Mng., March 2,1912; p. 358; 1500 w*; 35c.

Lambert, L.—*Chemins de Fer Funiculaires et Transport Aériens;* [Cableways and aerial transportation].—Paris, 1911 (2d edition); 526 pp*; (book).

Lechat, V.—*Transport mécanique;* [Automatic tramway at the Kessales collieries, Belgium].—Annales d. Mines (Belg.), 1912, No. 1; p. 166; 500 w*; 95c.

Mann, F. P.—*The Suspended Passenger Cableway up Mont Blanc.*—Engg. Record, March30,1912; p. 343; 1500 w*; 20c.

McClave, J. M.—*Milling the Tam O'Shanter Ore;* [Ashcroft, Colo.; includes notes on aerial tramway].—Mines & Minerals, March,1912; p. 492; 1600 w*; 35c.

Moss, L. DeG.—*A Study of Mechanical Conveyors;* [Belt conveyors, aerial tramways, cable railways].—Columbia School of Mines, Quar'ly; April,1912; p. 233-259*; 65c.

Perkins, F. C.—*The Tesorero Mine Aerial Tramway;* [10-mile haul of iron ores, Spain].—Mines & Minerals, Apr.,1912; p. 571; 1000 w* 35c.

Petersen, A. G.—*Utlastningsanordningar för malm paa ön Elba;* [Iron-ore loading and transportation equipment on Elba island].—Jernkontör. Annaler, Bihang; Dec.,1911; pp. 979-988*; 45c.

Pusch, K.—*Ein automatischer Bremsberg;* [Automatically operated inclined planes in the Polish Ostrau-Karwin coal field].—Montanist. Rundschau, March16, 1912; p. 249; 1000 w*; 45c.

Reef, A. J.—*Tipple at Delagua Mine, Colo.*—Mines & Minerals, March,1912; p. 456; 1500 w*; 35c.

Rogers, W. O.—*Winding Engines of the Ashley Planes,* [Wilkes-Barre, Pa.].—Power, April2,1912; p. 456; 1800 w*; 15c.

Smith, J. J.—*A New Type of Gravity Plane.*—E. & M. J., Apr.13,1912; p. 743; 10,000 w*; 25c.

Sneddon, J. B.—*Description of the Aerial Ropeway from the Shale Mines to the Oil Works at Oakbank, Midcalder;* [Read to Mng. Inst. of Scotland; abstract].—Coll'y Guardn., Dec.22,1911, p. 1236; Feb.23, p. 375; 1500 w*; 30c.

Storms, W. H.—*Trestles for Mine Tramways.*—Mining & Engg. World, Sept.23, 1911; p. 591; 750 w*; 10c. Reprinted in Queensl. Gov't Mng. Jnl., Jan.,1912; p. 16*; 35c.

Thiery & Cretin.—*Etude sur les cables transporteurs aériens;* [Studies on aerial cableways; V: The cable, its composition, structure, and computations].—Rev. de Mécaniq., Jan.,1912; pp. 25-48*; $1. Continued from July, Sept. and Dec.,1910; April and Oct.,1911.

Tupper, C. A.—*Storage and Ship-Loading Plant, Vivero Iron Ore Co.;* [Long cableway and loading piers, Lugo, Spain].—Mining & Engg. World, Feb.24,1912; p. 443; Apr.6, p. 693; 5000 w*; 40c.

Tupper, C. A.—*Argentine Government Aerial Tram;* [Famatina copper district].—E. & M. J., March23,1912; p. 601; 2500 w*; 25c.

Tupper, C. A.—*An African Freight Cableway;* [For timber, Usambara Mtns., German E. Africa].—Engg. News, Feb.29,1912; p. 374; 2000 w*; 25c.

Tupper, C. A.—*Modern Ore Handling Methods in Spanish Iron Mines;* [Bleichert cableway at Orconera Iron Ore Co. mines, Biscay].—Mining & Engg. World, Jan.20, 1912, p. 107; 2500 w*; 10c. Abstract in W. Australian Mng., etc., Jnl., Apr.6, p. 12; 2400 w; 35c.

German abstract in Erzbergbau, March 1,1912; p. 66; 1500 w*; 35c. Also in Organ d. Bohrtechniker, Apr.1, p. 74; 1800 w*; 35c.

French abstract in Rev. Noire, March31, p. 149; 1800 w*; 35c. Also in Fer & Acier, March, p. 31; 1800 w*; 35c.

Van Law. C. W.—*Aerial Tramway of the Real del Monte Co., in Pachuca.*—Mex. Instn. of Mng. & Met'l'gy, Trans.; Vol. 2, No. 6; 1912; pp. 214-219* (Spanish abstract); 50c.

A. C.—*Installations de transbordement des minerais de la Société Elba, à l'Ile d'Elbe;* [Iron-ore loading equipment at Elba].—Génie Civil, Jan.6,1912; p. 181; 2000 w*; 50c.

———. *Aerial Ropeway for a Shropshire Quarry.*—Stone Trades Jnl., March, 1912; p. 1070; 3500 w*; 35c.

———. *Idler for Hoisting Rope in Inclines;* [In Michigan copper shafts; underground].—E. & M. J., Feb.3,1912; p. 254; 500 w*; 25c.

———. *Luftseilbahnen zur Personenbeförderung;* [Aerial cableways for passenger service; Aiguille du Midi, at Chamonix].—Fördertechnik, Nov.,1911, p. —; Dec., p. 249-254*; $1.

———. *Pont-plate-forme de communi-*

cation entre plan incliné et voies chassantes de galeries de mines; [Draw-bridge platform connecting inclined planes with movable mine haulage ways or ore bins; Giloteaux system].—Rev. Noire, March17,1912; p. 129; 1200 w*; 35c.

———. *Product of Three Openings Handled by One Tipple;* [Greene car haulage system at Burnside breaker of Phila. & Reading Coal & Iron Co.].—Black Diamond, Feb.10,1912; p. 15; 2100 w*; 30c. Also in Engg. Record, Feb.10, p. 159; 1000 w*; 20c. Also in Coal Age, Feb.17, p. 605; 1800 w*; 20c.

———. *Reinforced Concrete Trestle;* [Coal trestle at Delawanna, N. J.].—Engg. Record, March9,1912; p. 263; 600 w*; 20c.

———. *Seil- und Kettenförderungen;* [Some Orenstein & Koppel aerial cableways and inclined-plane haulages].—Ton-Industrie Ztg., Feb.10,1912, p. 228; 1000 w*; 30c.

———. *Transporteur électrique sur voie aérienne pour déchargement de charbon;* [Electric aerial trolley for transporting coal in Saône-et-Loire].—Génie Civil, Jan.20, 1912; p. 232; 500 w*; 50c.

———. *The International Cable Railway System.*—Manfrrs. Record, Apr.18, 1912; p. 61; 800 w*; 25c.

———. *Two Novelties in Aerial Tramway Construction;* [For carrying spectacle cases in American Optical Co. works, and dynamite dope at Du Pont de Nemours works].—Engg. News, Apr.4,1912; p. 635; 1000 w; 25c.

———. *Ultimos adelantos en la construccion de tranvias aereos;* [Some improved modern types of Pohlig cableways].—Rev. Minera, March 8, 1912; p. 115; 1200 w*; 35c.

———. *Versuche und Verbesserungen beim Bergwerksbetriebe,* 1911; [Innovations and improvements in mining practice in Prussia in 1911; cableways and trams].—Zts. f. d. Berg-, H-, & Salinenw., Vol. 60, No. 1; 1912; pp. 118-120*; $1.50.

ACCIDENTS

In Mining

GAS AND DUST EXPLOSIONS

Beach, C. S.—*The Susie, Wyoming, Explosion.*—Coal Age, Apr.20,1912; p. 908; 1200 w*; 20c.

Böckh, H. von.—*Ueber die Erdgaseruption bei Kissarmas;* [The natural gas eruption at Kissarmas, Oct.29,1911].—Organ d. Bohrtechniker, Jan.15,1912, p. 13; 5000 w*; 45c.

Brook, N. J., and S. H. Williams.—*Explosion at Welch, W. Va.* [Jed mine].—Coal Age, Apr.6,1912; p. 840; Apr.13, p. 871; 4000 w*; 30c.

Also described in Coal & Coke Op., Apr.4, 1912; p. 219; 1000 w; 20c. Also in Mines & Minerals, May, p. 579; 4500 w*; 35c.

Chamberlin, R. T.—*Notes on Explosive Mine Gases and Dusts, with Special Reference to the Monongah, Darr and Naomi Mines;* [Reprint of U. S. Geol. Survey Bull. 383].—U. S. Bur. of Mines, Bull. 26; 1911; 65 pp; 25c.

Clemons, M. J.—*A Comment on the Jed Explosion.*—Coal Age, May18,1912; p. 1049; 800 w; 20c.

Coulthard, R. W.—*The Bellevue Mine Disaster, Alberta.*—Canadian Mng. Jnl., Feb.1,1912; p. 79; 4000 w; 25c.

Couriot, H. and J. Meunier.—*Phénomènes spéciaux accompagnant la rupture des filaments incandescents dans les mélanges d'air et de gaz combustible;* [Studies on the effect of rupture of incandescent filaments in mixtures of air and combustible gases].—Génie Civil, Feb.3,1910; p. 224; 4500 w*; 50c.

Abstract in English in Coll'y Guardn., Apr.26, p. 832; 1000 w; 35c.

David, W. T.—*Radiation in Explosions of Coal Gas and Air.*—London, 1911; 24 pp.; 75c; (pamphlet).

Fursman, W. H.—*Explosion at Sans Bois Mine No. 2;* [McCurtain, Okla.; 74 dead].—Coal Age, Apr.13,1912; p. 868; 2000 w*; 20c.

George, W. H.—*The Susie, Wyoming, Explosion;* [Kemmerer Coal Co.; Mine No. 4; Jan.20,1912].—Coal Age, Feb.; p. 650; 1000 w*; 20c.

Graham, Chas.—*Explosion at Merritt, B. C.*—Coal Age, May11,1912; p. 1005; 1000 w*; 20c.

von Höfer, H.—*Der Gasausbruch bei Kissármás und die Argille Scagliose;* [The natural-gas eruption at Kissarmas, and history of ancient gas eruptions in Italy and elsewhere in Europe].—Organ d. Bohrtechniker, Feb.1,1912; p. 25; 750 w; 45c.

Hollender, —. *Die Explosion auf der Steinkohlengrube Radbod I/II bei Hamm i. W. am 12, November* 1908; [The explosion at the Radbod Colliery I/II, at Hamm, Westphalia, Nov. 12, 1908, Prussia's worst catastrophe (348 dead); the accident, rescue work, and resumption].—Zts. f. d. Berg-, H-, & Salinenwesen, Vol. 59, No. 5. 1911; p. 769-828*; $1.15. Also in Glückauf, Feb.3, p. 169-184; Feb.10, p. 209-218*; Feb.17, p. 253-268*; 95c. Abstract in Deu. Bergwerks Ztg., Feb.13, p. 1; 1500 w; 45c.

Laske, —. *Der Kohlensäureausbruch auf dem Steinkohlenbergwerk Cons. Rubengrube bei Neurode am 17 Sept.,* 1911; [The carbon dioxide outburst at the Cons. Rubengrube colliery, near Neurode, Prussia, Sept.17,1911].—Zts. f. d. Berg-, H-, & Salinenw., Vol. 60, No. 1; 1912; pp. 74-80*; $1.50.

Pfeifer, J.—*Beiträge zur Verschliessen von Hochdruckgasbrunnen;* [Control of high-pressure natural-gas wells, and notes on the Kissarmas, Hungary, explosion; read to Ungar. Naturw. Ver., chemisch-mineralog. section, Feb.,1912; brief mention in] Chemiker Ztg., May28,1912; p. 596; 100 w; 35c.

Pozzi-Escot, E.—*Explosions et explosifs; phénomènes d'explosion;* [Explosions and explosives; the phenomena of explosions—chemical and biologic].—Paris, 1912; pp. —; $35 (book).

Redmayne, R. A. S.—*Report of the Bignall Hill Colliery Explosion;* [Jammage fire and explosion, Nov.25,1911; abstract of Cd. No. 6152, 1912].—Coll'y Guardn., May 3,1912; p. 881; 7000 w*; 35c. Also in Iron & Coal Trades Rev., May3, p. 682; 4800 w*; 35c. Also in Sci. & Art. of Mng., May 25, p. 493; p. 486; 3000 w; 35c. Also in Coal Age, June15, p. 1180; 2500 w*; 20c.

von Rosen, —. *Plötzliche Gasausbrüche;* [Some sudden gas outbreaks in Belgian collieries].—Bergbau, Feb.29,1912; p. 121; 1800 w; 35c.

Rhys, R. T.—*Review of Iowa Mine Explosions.*—Coal Age, May11,1912; p. 1004; 2000 w; 20c.

Schulz, W.—*Die plötzlichen Gasausbrüche in den belgischen Kohlengruben während der Jahre* 1892 *bis* 1908; [The sudden gas outbursts in the Belgian coal mines from 1892 to 1908].—Glückauf, Jan.13,1912, pp. 60-69*; Jan.20, pp. 96-107*; Jan.27, pp. 129-137*; $1.50.

Steel, A. A.—*Mine Explosion at McCurtain, Oklahoma;* [Sans Bois colliery No. 2, Haskell county].—Mines and Minerals, May, 1912; p. 587; 5000 w*; 35c.

Also described in Coal Age, March30, 1912; p. 812; 1200 w*; 20c.

Sylvester, G. E.—*State Mine Inspector's Report on Cresso Mountain Disaster;* [Cross Mountain mine explosion at Briceville, Tenn., Dec.9,1911].—Coal Trade Bull., June1,1912; p. 43; 5000 w; 25c. Also in Coal & Coke Op., Apr.25, p. 257; 4200 w; 25c.

Taffanel, J.—*Les catastrophes du puits West Stanley et du puits Pretoria;* [The West Stanley and Hulton collieries explosions, England; report of French commissioner of investigation].—Annales d. Mines (Paris), Nov.,1911; pp. 363-447*; $1.50. Abstract in Soc. Amicale d... Mineurs de Douai, Bull., Feb.25, p. 111; 1500; 35c.

Abstract in English in Coll'y Guardn., Feb.2,1912; p. 229; 3300 w; 30c.

Verner, J.—*Causes of Iowa Mine Explosions;* [In dry, non-gaseous mines].—Coal Age, Feb.3,1912; p. 545; 3300 w; 20c.

M. E.—*After-Damp and Colliery Explosion;* [Includes historical record of explosions].—Sci. & Art of Mng., May11,1912; p. 464; 2400 w; 35c.

———. *Cross Mountain Mine Explosion;* [Briceville, Tenn.].—Mining & Engg. World, Dec.16,1911; p. 1223; 2000 w; 10c. Also in Black Diamond, Dec. 16; p. 17; 1200 w; 25c. Also in Coal Age, Dec.16; p. 307; Dec. 23; p. 343; 4500 w*; 30c. Also in Coal Trade Bull., Jan.15,1912, p. 43; 2400 w; 25c. Also in Mines & Minerals, Feb.,1912; p. 393; 5000 w*; 35c.

———. *Disaster at Diamond Vale Mine;* [Explosion at Merritt, Br. Columbia, in Nicola coal field].—B. C. Mng. & Engg. Record, March,1912; p. 239; 9000 w; 35c. Also described in Coal Age, Apr.27,1912; p. 939; 750 w; 20c.

———. *Earthquakes and Mine Explosions;* [Resumé of discussion before Internatnl, Asso. of Siesmology].—Coal Age, March9,1912; p. 702; 1400 w; 20c.

———. *The Killingworth Colliery Explosion, N. S. W.; What Was the Cause?*—Australian Mng. Standd., Jan.25,1912; p. 80; 1500 w; 35c.

FIRES

Brady, F. W.—*The Carbondale Mine Fire, Penn.*—Mines & Minerals, Jan.,1912; p. 340; 1200 w; 35c.

Heys, W.—*Symptoms and Treatment of Gob Fires.*—Sci. & Art of Mng., Jan.20,1912, p. 287; 1600 w*; 35c.

Pickering, W. H.—*Gob Fires in the South Yorkshire Coalfield.*—Coll'y Guardn., Jan. 12,1912, p. 89; 2000 w; 30c. Also in Iron & Coal Trades Rev., Jan.12, p. 54; 2000 w; 30c. Also in Coal & Coke Op., Feb.8, p. 86; 1200 w; 25c. Also in Mng. Engg., Feb., p. 303; 2000 w; 35c. Also in Coal Age, Feb.17, p. 614; Feb.24, p. 643; 1800 w; 30c.

Sanderson, H. H.—*The Giroux Mine Fire;* [Shaft fire in Nevada copper mine].—Mines & Minerals, Feb.,1912; p. 435; 2000 w*; 35c.

Williams, R. Y.—*Extinguishing the Majestic Mine Fire;* [Use of helmets in Franklin county, Ill.].—Mines & Minerals, Jan., 1912, p. 342; 3000 w*; 35c.

———. *The Jammage Mine Fire.*—Coal Age, Feb.17,1912; p. 615; 600 w; 20c.

MISCELLANEOUS MINE ACCIDENTS

See also under "Supports."

For workmen's compensation, etc.; see under "Labor."

Beard, J. T.—*American Versus English Mine Fatalities.*—Coal Age, Jan.6,1912, p. 403; 1600 w; 20c.

Chilton, Jas.—*Accidents in Transvaal Mines with Special Reference to Falls of Ground.*—Chemi. Met. & Mng. Soc. of S. Afr., Jnl., Nov.,1911, p. 158-166*; (Discussion), Dec., pp. 230-236; Jan., p. 280-7; Feb., pp. 319-332; March, pp. 367-370; April, pp. 408-414; May, pp. —; $4.50

Abstract in S. Afr. Mng. Jnl., Nov.25. 1911; p. 419; 1000 w; 35c. Also in E. & M. J., July20, p. 103; 1800 w; 25c.

Corkill, E. T.—*Report on the Mining Accidents in Ontario for Jan., Feb. and March,* 1912.—Ontario Bur. Mines, Bull. 10; 1912; 11 pp.

Corkill, E. T.—*Report on the Mining Accidents in Ontario in* 1911.—Ont. Bureau of Mines, Bull. 9; 1912; 25 pp; 50c.

Cornet, F. C.—*West Virginia Mining Accidents;* [Read to W. Va. Mng. Inst.; abstract].—Coal Age, June6,1912; p. 1132; 3500 w; 20c. Also in Coal Trade Bull., July1, p. 52; 4800 w; 25c. Also in Coal & Coke Op., July4, p. 417; 7000 w; 25c.

Coulson, R. H.—*Accidents and Safety Measures in Cornish Mines.*—E. & M. J., Jan.20,1912, p. 165; 750 w; 25c.

Dietrich, G. H.—*Seilbruche und ihre Ursachen;* [Cable fractures and their causes].—Kohle & Erz, Jan.15,1912, p. 54; 1200 w; 35c.

Eddy, L. H.—*Caving of the Bunker Hill Shaft, Cal.*—E. & M. J., Feb.24,1912; p. 402; 1200 w; 25c.

Eddy, L. H.—*Righting Overturned Dredges;* [in California goldfields].—E. & M. J., Feb.10,1912; p. 316; 1200 w*; 25c.

Eddy, L. H.—*Breaking of the Gold Cliff Hoist Cable;* [Angels Camp, Calaveras county, Cal.].—E. & M. J., May11,1912; p. 952; 750 w*; 25c.

Fabien, —. *Accidents survenus dans les mines d'Espagne pendant l'année,* 1911; [Statistics of accidents in Spanish mines in 1911].—Soc. Amicale d. Mineurs de Douai, Bull., Feb.25,1912; p. 128; table; 35c.

Gray, F. W.—*Coal Mine Fatalities in Canada;* [N. S. and B. C.; mortality statistics].—Canadian Mng. Jnl., Feb.15,1912; p. 115; 1500 w; 25c.

Hoffman, F. L.—*Coal Mine Mortality Statistics.*—Coal Age, Jan.6,1912, p. 400; 2500 w; tables; 20c.

Hoffman, F. L.—*Accidents in Anthracite Coal Mines;* [Mortuary and non-fatal statistics in Penn'a].—Coal Age, Apr.27,1912; p. 940-943; tables; 20c.

Hurter, Chas. S.—*Accidents in the Transportation, Storage and Use of Explosives.*—Lake Superior Mng. Inst., Proc., 1911; pp. 177-210. Abstract in Mining & Engg. World, Sept.30,1911, p. 627; 3100 w; 10c.

German abstract in Zts. f. Sprengstoffwesen, March1,1912; p. 93; 3200 w; 35c.

Lakes, A., Sr.—*Snowslides in Mining Districts in British Columbia.*—Mining & Engg. World, March2,1912; p. 505; 2500 w*: 10c.

Lakes, A., Sr.—*Effects of Landslides in Mining Regions.*—Mining & Engg. World, Apr.20,1912; p. 861; 2200 w*; 10c.

Rogers, A. W.—*Migration of Miners and Accidents on the Rand;* [Claims accidents increase with increased migration rate].—E. & M. J., June8,1912; p. 1141; 1200 w; 25c.

Schaar, R.—*Zum Bauunfall des Spreetunnels zu Berlin am 27 Mürz,* 1912; [The

accident to the tunnel under the Spree river, Berlin, March 27, 1912; from Technische Rundschau].—Organ d. Bohrtechniker, May 15,1912; p. 115; 3000 w*; 35c.

State Mining Board.—*Thirtieth Annual Coal Report of Illinois;* [For year ended June30,1911].—Springfield, 1912; 445 pp.; 50c.

Steele, H. — *Mine Accidents;* [Printed forms for recording inspection and accidents].—Mines & Minerals, Apr.,1912; p. 34; 1600 w*; 25c.

Victor, D.—*Coal Mine Statistics;* [Review of W. Virginia statistics for 1910; read to W. Va. Coal Mng. Inst., June,1912].—Coal Trade Bull., June15,1912; p. 42; 4800 w; 25c. Also in Coal & Coke Op., June20, p. 385; 4800 w; 25c.
Abstract in Coal Age, June15, p. 1176; 1200 w; 20c.

———. *Accidents in Rand Mines;* [Reviews rate and methods of obtaining it].—S. Afri. Mng. Jnl., Jan.27,1912; p. 737; 1600 w; 35c.

———. *Bergwerke, Steinbrüche und Salzwerke im Oberbergamtsbezirk Bonn* 1911; [Statistics of accidents in the Bonn inspection district, 1911].—Glückauf, Apr.13,1912; p. 607-608; tables; 50c.

———. *Chronology of Mine Accidents in the U. S. in* 1911.—Mining & Engg. World, Jan.27,1912, p. 193; 4500 w; 10c.

———. *Chronology of Mining [and Accidents] in* 1911.—E. & M. J., Jan.6,1912, p. 33; 2400 w; 25c.

———. *Chronology of Coal Mining for* 1911.—Coal Age, Jan.6,1912, p. 423; 1600 w; 20c.

———. *Los accidentes del trabajo en las minas;* [Statistics of mining accidents in Spain in 1901 and 1911].—Rev. Minera, Jan.16,1912, p. 27; 800 w; 35c.

———. *New Seismometers and Artificial Earthquakes;* [Describes experiment station for mines at Bochum, Germany].—Engg., Jan.5,1912; p. 7; 2500 w*; 35c.

———. *Unfallstatistisches aus dem Jahre,* 1911; [Statistics of accidents in Germany in 1911].—Ton Industrie Ztg., May16,1912; p. 818; 1000 w; table; 35c.

In Milling, Metallurgy, etc.

Breyre, Ad.—*Les asphyxies par les gaz des hauts-fourneaux;* [Asphyxiation due to the gases of blast-furnaces, with review of such accidents in Belgium, 1906-1911].—Annales d. Mines (Belgiq.), 1912, No. 1; pp. 65-156*; 95c. Abstract in English Iron & Coal Trades Rev., May17,1912; p. 810; 2800 w*; 35c.

Ganet, L.—*A propos d'explosions attribués au ferro-silicium dans des poches d'acier;* [Explosibility of ferro-silicon in steel bins].—Jnl. du Four Electriq., March1, 1912; p. 97; 2400 w; 35c. Echo d. Mines, March11, p. 316; 2400 w; 35c.

von Gumberz, A.—*Ferrosilizium Explosionen und ihre vermutlichen Ursachen;* [Ferro-silicon explosions and their causes].—Stahl & Eisen, Feb.15,1912; p. 267; 3500 w; 75c.

Mastbaum, H.—*Gefährdung eines Dampfertransports durch Schwefelkies;* [Danger of shipping pyrite by vessel; change of Huelva cargo to sulfate on dampening].—Chemiker Ztg., Jan.9,1912, p. 30; 1100 w; 30c.

———. *Hochofenexplosion auf der Hütte Phönix;* [Explosion at the Phoenix blast furnace, Ruhr district, Prussia, Jan., 1912].—Stahl & Eisen, Jan.25,1912; p. 151; 750

HYGIENE; SAFETY; RESCUE

In Mining

RESCUE STATIONS AND RESCUE EQUIPMENT

Bock, Fr.—*Staatliche Rettungsinstitute für Bergleute in Amerika;* [Federal and state rescue stations for mines in America].—Arena, 1911, No. 6, pp. 884-889; $1

Cadman, Prof. J., and others.—*An Investigation of Self-Contained Breathing Apparatus;* [Report of committee of S. Midland Coal Owners].—Birmingham, Engl., 1911; pp. —; $1.75 (book).
Abstract in Colliery Guardn., Sept.1, 1911, p. 415; Sept.8, p. 467; 9500 w; 50c. Also reviewed in Mining & Engg. World, Oct.21,1911, p. 805; 2100 w*; 10c. Also in Coal Age, Jan.27,1912, p. 509; 1800 w; 20c.

Crawford, R.—*Equipment and Work of the Fife and Clackmannan Joint Colliery Station;* [Read to Natnl. Asso. of Coll'y Managers, Scottish branch].—Iron & Coal Trades Rev., Jan.5,1912, p. 1; 7000 w*; 30c.

Grahn, —. *Versuche mit dem Pneumatogen,* 1910; [Test of pneumatogen apparatus, 1910 model, at the Bochum School of Mines].—Glückauf, March2,1912; p. 346-352*; 50c.

Haase, —. *Sauerstoff Atmungsapparate zur Wiederbelebung Betäubter;* [Oxygen breathing devices and pulmotors for resuscitation].—Zts. f. Kompr. Gase, Nov.,1911, pp. —; Dec., pp. 45-50*; $1.

Liwehr, A. E.—*Neuerungen auf dem Gebiete des Grubenrettungswesens;* [Newer developments in mine-rescue work].—Montanist. Rundschau, Jan.1,1912; p. 11; Jan. 16, p. 62; Feb.1, p. 105; Apr.1, p. 306; May 1, p. 397; $15,000 w*; $1.50.

Penkert, P.—*Eine auf dem Gebiete des Grubenrettungswesens Bedeutung nehmende Neuerung;* [The Penkert bicycle and motorcycle for mine rescue work].—Kohle u. Erz., Dec.25,1911, p. 1319; 1200 w; 35c.

Perkins, F. C.—*An English Mine Rescue Motor Car.*—Coal & Coke Op., March14, 1200 w; 25c. Also in Mng. Engg., Feb., p. 303; 2000 w; 35c. Also in Coal Age, Feb. 17, p. 614; Feb.24, p. 643; 1800 w; 30c.

Pütz, O.—*Das Rettungswesen im Bergbau;* [Mine rescue work in the various nations of the world, including notes on governmental regulations; read to International Hygiene Congress, Dresden].—Oberschles. Berg- & Hüttenm. Ver., Zts., March,1912; p. 99; 12,000 w; 45c.

Ryba, G.—*Das Rettungswesen im Bergbau;* [Mine rescue equipment (cont.); a: Gas indicators and gas sampling; b: Surface equipment of rescue stations].—Zentral Verbd. Bergbau Betriebsl. Oestr., Zts., March1,1912; p. 130-138*; (b), March15. pp. 162-169*; April1, pp. 190-196*; April 15, p. 229-236; May15, p. 298-304*; $1.20.

Ryba, G.—*Das Rettungswesen im Bergbau;* [Mine Rescue Work; portable telephones for parties of 2 or 3 men].—Zentr. Verb. Bergbau Betriebsleiter Oestr., Zts., Dec.1,1911; p. 506; 2000 w*; 45c.

Ryba, G.—*Das Rettungswesen im Bergbau;* [Mine rescue equipment (cont.); Extinguishing and handling mine fires].—Zentral Verbd. Bergbau-Betriebsl. Oestr., Zts., Jan.15,1912, p. 47; Feb.1, p. 75; March1, p. 130; 7000 w*; 90c.

Sanderson, H. H.—*Use of the Oxygen Helmet in High Temperatures.*—Mines & Minerals, Jan.,1912; p. 335; 700 w; 35c. Reprint in Queensl. Govt. Mng. Jnl., Apr., 1912; p. 152; 35c.

Stoek, H. H.—*Mine Rescue Service of the State of Illinois.*—Amer. Inst. Mng. Engrs.,

Bull., Dec.,1911, pp. 951-960*; $1.15. Abstract in Canadian Mng. Jnl., Jan.1,1912; p. 24; 2600 w; 25c. Also in Coll'y Guardn., Feb.9,1912, p. 279; 2000 w*; 30c. Also in Coal Age, Feb.17, p. 598; 2000 w*; 20c.

G. S.—*Der verbesserte Atmungs-Apparat "Aerolith";* [The improved Aerolith breathing device].—Kohle & Erz, Apr.15,1912; p. 362; 1800 w*; 35c.

———. *Appareil respiratoire à oxylithe système Vanginot-Mandet;* [The Vanginot-Mandet oxylith respirator].—Rev. Noire, Feb.18,1912; p. 80; 1200 w*; 35c.

———. *An Improved Mine Rescue Apparatus;* [Servius breathing equipment].—Coal Age, May25,1912; p. 1073; 1800 w*; 20c.

———. *British Rescue and Aid Act.*—Mines & Minerals, Apr.,1912; p. 516; 1000 w; 35c.

———. *Colliery Rescue Station in Fife.*—Coll'y Guardn., Jan.19,1912, p. 143; 800 w; 35c.

———. *Emergency Car of Colorado Fuel & Iron Co.*—Coal Age, May4,1912; p. 982; 1000 w*; 20c.

———. *Lehigh Coal & Navigation Co.'s Underground Hospital.*—Coal Age, June1, 1912; p. 1120; 800 w*; 20c.

———. *Provision for Mine Rescue Work in British Columbia.*—Canadian Mng. Jnl., June1,1912; p. 375; 1200 w; 25c.

———. *Rescue Stations in Coal Mining Districts: Action in New South Wales.*—Australian Mng. Standd., Dec.14,1911, p. 590; 900 w; 35c.

———. *The Synchron Respiration Apparatus.*—E. & M. J., March16,1912; p. 548; 1200 w*; 25c.

———. *Victor-American Fuel Co.'s Instruction Car;* [Hastings, Colo.].—Mines & Minerals, Jan.,1912; p. 348; 1000 w*; 35c.

FIRST AID

Burkhard, E. D. and S. Dean.—*First-Aid Work and First-Aid Contests;* [Importance of competition, organization and correct judging].—Mines & Minerals, Jan.,1912; p. 334; 2000 w; 35c.

Cantlie, Jas.—*British Red Cross Society; First-Aid Manual No.* 1.—London, 1912; pp. xvi, 219; 123 figs.; 75c; (book).

Hale, H.—*Reviving Suffocated Miners.*—Mines & Minerals, June,1912; p. 661; 1200 w*; 35c.

Jicinsky, L.—*Anleitung zur ersten Hilfleistung in Gruben und Hütten;* [Introduction to First-Aid in Mines and Metallurgic Works].—Ostrau, Moravia; 1912 (2d edition); 224 pp; 87 figs; $1 (book).

Lynch, Chas. and M. J. Shields.—*American Red-Cross Abridged Text-Book on First Aid.*—Philadelphia, 1911; 186 pp.; 50c. (book).

Lynch, Chas.—*First Aid in the Coal Mining Industry.*—Coal Age, Jan.13,1912, p. 445; 800 w; 20c.

Shields, M. J.—*The International Red Cross Conference at Washington, D. C.*—Coal Age, May25,1912; p. 1080; 750 w*; 20c.

Shields, M. J.—*First Aid at Frick Plants.*—Coal Age, Jan.27,1912, p. 523; 1000 w*; 20c.

Tobey, C. E.—*First Aid Methods of Lackawanna Co.*—Coal Age, March16, p. 753; 1600 w*; 20c.

———. *First Aid and Oxygen Helmet Work at the Colorado School of Mines.*—Colo. School of Mines Mag., Apr.,1912; p. 155; 1000 w; 50c.

———. *A First Aid Packet.*—Coal Age, March30,1912; p. 821; 1000 w*; 20c.

SANITATION; BATHS; CHANGE HOUSES, ETC.

Bulman, H. F. and W. B. Wilson.—*Miners' Baths;* [Describes some European establishments; read to N. of Engl. Inst. of Mng. & Mechl. Engrs.].—Coll'y Guardn., Feb.16,1912; p. 324; Apr.19, p. 788; 5000 w*; 50c. Also in Iron & Coal Trades Rev., Feb.16, p. 241; Apr. 19, p. 603; 5000 w*; 50c.

Frey, —. *Neuere Fortschritte in der Hygiene des Hüttenwesens und Bergbaus in Deutschland;* [Newer progress in mining and metallurgic hygiene in Germany].—Schrift. Gerichtl. Med., 1st Supplement, Jan.,1912; pp. 113-142.

d'Haenens,—. *Installations sanitaires et hygièniques;* [Wash and change house at Anderlues colliery, Belgium].—Annales d. Mines (Belgiq.), Vol. 17, No. 2, 1912; p. 423; 300 w*; 95c.

Kuss, H.—*Notes sur les installations de bains-douches pour les ouvriers mineurs en Belgique;* [The shower-bath installations in Belgium for coal miners].—Soc. de l'Ind. Minrl. St. Etienne, Bull., Oct.,1911, p. 349-360*; $1.00. Abstract in Soc. Amicale. ..Mineurs de Douai, Bull., Dec.10,1911, p. 785; 1000 w; 35c.

Provost, A. J., Jr.—*The Sanitation of Contractors' Camps and the Patrol of Water Sheds.*—Asso. of Engg. Soc's; Jnl.; March,1912; p. 97-105*; 40c. Abstract in Engg. Mag., June,1912; p. 437; 1600 w; 35c.

Redmayne, R. A. S.—*Miners' Baths;* [in Britain, Belgium, France, Germany; abstract from Introduction to Part II, General Report on Mines & Quarries f. 1910; Gt. Britain].—Coll'y Guardn., Jan.12,1912, p. 77; 2000 w*; 30c.

Reid, G.—*Practical Sanitation.*—London, 1912 (16th edition); 366 pp.; $2; (book).

Ross, W. H. and R. C. Benner.—*Disinfecting Miners' Dwellings.*—M. & S. P., Dec. 30,1911, p. 829; 2800 w; 20c.

Steel, A. A.—*A Change House for Miners.*—Mines & Minerals, June,1912; p. 647; 1500 w*; 35c.

Wallace, R. B.—*Drinking Water in the Mine;* [Bubbling fountains underground in Michigan iron mines].—E. & M. J., March 23,1912; p. 587; 200 w*; 25c.

———. *Miners' Baths;* [British plants; also French and German; from Part II of British report on Mines & Quarries, 1910].—Mng. Engg., Dec.,1911, p. 250; 1500 w; 35c. Also in Coal Age, Jan.27,1912, p. 502; Feb.3, p. 538; Feb.10, p. 573; 6000 w*; 40c. Also in S. Afr. Mng. Jnl., Jan.6,1912, p. 656; 2000 w; 35c.

PATHOLOGIC CONDITIONS (PHTHISIS, NYSTAGMUS, ANKYLOSTOMIASIS)

See also dust problem in "Drilling." See also pathologic conditions under "Gases and Ventilation."

Chance, E. M.—*The Examination and Physiological Action of Pathogenic Mine Atmospheres.*—Franklin Inst., Jnl., Nov., 1911, pp. 461-494; 65c. Abstract in Coal Age, Dec.30,1911, p. 373; Jan.13,1912, p. 448; Jan.27, p. 506; 7500 w; 40c.

de la Cuadra, B.—*La anquilostomiasis en las minas de Linares;* [Ankylostomiasis in the lead mines of Linares, Spain].—Rev. Minera, Dec.16,1911, p. 624; 2000 w;

35c. Also in Rev. Minera (Linares), Dec. 20,1911, p. 959; 2000 w; 35c.

Ford, C. M.—*The Water Cure for the Dust Evil;* [Read to S. Afr. Inst. of Engrs.; abstract].—S. Afr. Mng. Jnl., Feb.10,1912; p. 833; 1200 w; 35c.

Hanauer, W.—*Das Augenzittern der Bergleute;* [Nystagmus or miners' eye twitch].—Oestr. Zts. f. Berg- & Hüttenwesen, Dec.23,1911, p. 707-8; 50c.

Hanauer, W.—*Die Einwirkung des Klimas in Bergwerken auf die Bergarbeiter;* [Influence of mine temperatures and atmospheric conditions on the workman].—Oestr. Zts. f. Berg- & H-wesen, Jan.6,1912; p. 10; 1400 w; 45c.
English abstract in E. & M. J., Apr.27, p. 852; 1200 w; 25c.

Hanauer, W.—*Die Krankheiten der Bergleute;* [The special diseases of minersj.—Erzbergbau, Jan.15,1912; p. 22; 1200 w; 35c.

Hill, L.—*Caisson Sickness and the Physiology of Work in Compressed Air.*—London, 1912; pp. —; $3.50 (book).

Jourdan, C. J. N.—*The Prevention of Dust in the Development of Drives of Mines During Drilling Operations;* [Watering holes while drilling; read to S. Afr. Inst. of Engrs.; abstract].—S. Afr. Mng. Jnl., Sept. 16,1911; p. 43; March16,1912; p. 65; 5000 w; 50c. Also abstracted in South Afr. Engg., Oct.31, p. 59; 76; 1500 w; 35c. Also in W. Australian Mng., etc., Jnl., Dec. 9,1911, p. 7; 1800 w; 50c. Reviewed in Engg. & Contractg., Jan.10,1912; p. 35; Jan.17, p. 58; 1300 w; 30c.

Kuss, H.—*Note sur la lutte contre l'Ankylostomasie dans les mines de Belgique;* [The combat against ankylostomiasis (worms) in Belgian coal mines].—Soc. de l'Ind. Minrl. St. Etienne, Bull., Oct.,1911, pp. 361-366; 75c.

Llewellyn, T. L.—*The Causes and Prevention of Miners' Nystagmus;* [From Roy. Soc., Proc.].—Coll'y Guardn., May10,1912; p. 931; May17, p. 986; 5000 w; 50c.

Ogilvie, R. S., and N. P. Brooks.—*The Hookworm and the Miner;* [Ankylostomiasis, causes and prevention].—Coal Age, June1,1912; p. 1106; 1500 w; 20c.

Sitges, J.—*Anquilostomiasis;* [Ankylostomiasis].—Rev. Minera, Apr.16,1912; p. 179; Apr.24, p. 195; 3500 w; 50c.
Reprint in Ingeniería (Madrid), Apr.20, p. 128; Apr.30, p. —; 3500 w; 50c. Also in Rev. Minera (Linares), May5, p. 1031; June5, p. 1047; 3500 w; 50c.

Snell, Dr.—*Nystagmus;* [Abstract of paper read to British Medical Asso.].—Coal Age, Jan.13,1912, p. 440; 500 w; 20c.

Starling, M.—*Some Suggestions Regarding Miners' Phthisis.*—S. Afr. Mng. Jnl., May4,1912; p. 361; 800 w; 35c.

Toth, Dr.—*Ankylostomiasis;* [History in Europe; read to Dresden International Hygiene Exhibition; abstract in English].—Coal Age, June15,1912; p. 1191; 800 w; 20c.

Royal Commission, W. Australia.—*Miners' Lung Diseases;* [Report of commission].—W. A. Mng., etc., Jnl., Dec.9,1911, p. 4; 2800 w; 50c. Abstract in S. Afr. Mng. Jnl., Apr.6, p. 197; 2000 w; 35c.

Miners' Phthisis Commission (Transvaal).—*Report and Recommendations;* [Abstract and discussion].—S. Afr. Mng. Jnl., March30,1912; p. 153; p. 135; April6, p. 210; 5000 w; 50c.

———. *Ankylostomiasis in Cornwall.*—E. & M. J., Apr.27,1912; p. 851; 400 w; 25c.

———. *An Experimental Station for the Rand;* [Underground mine-dust investigation proposed].—S. Afr. Mng. Jnl., Apr.27, 1912; p. 313; 1600 w; 35c.

———. *Consumption;* [Editorial discussion denying its prevalence among Pennsylvania coal miners].—Coal Age, May11, 1912; p. 1015; 750 w; 20c.

———. *Miners' Lung Diseases;* [Discusses Westralian royal commission report].—W. A. Mng., etc., Jnl., Dec.16,1911, p. 10; 750 w; 50c.

———. *Miners' Phthisis on the Rand.*—W. Australian Mng., etc., Jnl., Dec.23,1911, p. 9; 1200 w; 50c.

———. *Miners' Phthisis; the Penalty of Neglect;* [Reviews recent commissions].—Mng. Jnl., Feb.17,1912; p. 159; 3500 w; 35c.

———. *Mortality in the Mines* [Rand].—S. Afr. Mng. Jnl., Nov.11,1911, p. 332; 1200 w; 35c.

———. *Rand Miners' Phthisis Bill.*—Afr. World, May18,1912; p. 72; 3500 w; 35c.

———. *The Cause of Miner's Nystagmus and the Use of Safety Lamps.*—Coll'y Guardn., Apr.12,1912; p. 736; p. 746; 2000 w; 35c.

———. *The Fight Against Phthisis;* [Discusses findings of Rand commission and new Phthisis bill].—S. Afr. Mng. Jnl., Apr.13,1912; p. 232; 1000 w; 35c.

———. *The Hookworm;* [Ankylostomiasis].—Coal Age, June1,1912; p. 1113; 1200 w; 20c.

FIRE DAMP

See also under "Gases and Ventilation"; also under "Accidents"; also Gas Testing and Safety Lamps, under "Lighting."

Briggs, H.—*Testing for Firedamp and Blackdamp by Means of a Safety Lamp;* [Read to Mng. Inst. of Scotland; abstract].—Coll'y Guardn., Feb.23,1912; p. 375; 2500 w; 30c. Also in Iron & Coal Trades Rev., Feb.23, p. 285; 1500 w; 30c. Also in Coal & Coke Op., May9, p. 289; 4000 w*; 25c. (Discussion), Coll'y Guardn., Apr.19, p. 784; 1000 w; 30c.

Burrell, G. A.—*Characteristics of the Natural Gas Used at Pittsburgh;* [For artificial explosions in government experimental gallery; with notes on analytic methods].—U. S. Bur. Mines, Bull. No. 15; 1912; pp. 63-77; 10c.

Burrell, G. A.—*New Forms of Gas Analysis Apparatus;* [Mine gases; instruments of U. S. Bureau of Mines; read to Amer. Chemi. Soc.; abstract].—Coal & Coke Op., Jan.25,1912, p. 49; 2200 w*; 25c.

Cartwright, F. K.—*A Few Notes on Gas Caps, and a Simple Way of Estimating the Percentage of Firedamp in Mines* [By wick-flame of safety lamp; read to Natnl. Asso. of Coll'y Managers, Yorkshire branch; abstract].—Coll'y Guardn., March15,1912; p. 529; 3500 w*; 30c. Also in Iron & Coal Trades Rev., March15, p. 407; May17, p. 800; 7000 w; 50c. Also in Coal & Coke Op., March28, 1912; p. 195; 3600 w; 20c. Also in Mng. Engg., Apr., p. 33; June, p. 82; 3000 w; 50c.

Chamberlin, R. T.—*Notes on Explosive Mine Gases and Dusts, with Special Reference to the Monongah, Darr and Naomi Mines;* [Reprint of U. S. Geol. Survey Bull. 383].—U. S. Bur. of Mines, Bull. 26; 1911; 65 pp; 25c.

Couriot, H. and J. Meunier.—*Phénomènes spéciaux accompagnant la rupture des flaments incandescents dans les mélanges d'air et de gaz combustible;* [Studies on the effect of rupture of incandescent filaments in mixtures of air and combustible gases].—

Génie Civil, Feb.3,1910; p. 224; 4500 w*; 50c.

Abstract in English in Coll'y Guardn., Apr.26, p. 832; 1000 w; 35c.

Crane, W. R.—*Special Methods of Testing for Mine Gases;* [Read to Coal Mng. Inst. of Amer.; abstract].—Coal Age, Dec. 30,1911, p. 376; 1200 w*; 20c. Also in Coal Trade Bull., Jan.2,1912, p. 50; 3000 w; 25c. Also in Coal & Coke Op., Jan.4, 1912; p. 4; 2800 w; 25c.

Cunningham, W. H. and C. R. Conner.—*Release of Gas Accumulations;* [Gas explosions in abandoned workings, and borings for release of gas; read to Kentucky Mng. Inst.].—Coal Age, Dec.30,1911. p. 370; 1800 w*; 25c. Also in Mines & Minerals, Feb., 1912; p. 409; 1800 w*; 35c.

Dupuy, J.—*Divers types de lampes de sureté pour être employés dans les mines grisouteuses ou poussiéreuses;* [Decree of Feb. 23, 1912, enumerating safety lamps (11 of flame type, 5 electric) permissible in fiery or dusty coal mines in France, with descriptions of each lamp].—Annales d. Mines (Paris), April,1912; pp. 186-213*; 75c.

Féder, —. *Téléphone de sécurité pour mines grisouteuses;* [Safety telephones for fiery or gaseous mines].—Soc. de l'Ind. Minrl. St. Etienne, C-R., Oct.,1911, p. 572; 500 w; 75c.

Grundy, Jas.—*Method of Clearing Out an Accumulation of Firedamp or of Blackdamp in a Narrow Heading.*—Sci. & Art of Mng., Dec.23.1911, p. 235; 1000 w*; 35c.

Hauser, E.—*Comision del Grisu; Informe sobre la lámpara minera de seguridad, de acetileno, sistema Tombelaine;* [Report of the Spanish firedamp commission on the Tombelaine safety acetylene lamp].—Rev. Minera, Jan.24,1912, p. 38; Feb.1, p. 53; 7500 w*; 50c.

French abstract in Jnl. du Four Electriq., March,1912; p. 112; 1000 w; 35c.

Judd, E. K.—*Causes and Prevention of Coal Mine Explosions.*—Columbia Univ. School of Mines Quar'ly, Nov.,1911, pp. 65-71; 65c.

Lemaire, Em.—*Inflammation du Grisou par les filaments incandescents des lampes électriques;* [Framéries Experiment Station; Tests on the inflammability of firedamp by the incandescent filaments of electric lamps].—Annales d. Mines (Belgiq.), 1911, No. 2; pp. 321-367*; 90c.

Summary in English in Iron & Coal Trades Rev., Sept.8,1911, p. 365; 3000 w; 30c. Also in Mng. Engg., Oct.,1911, p. 212; 2500 w*; 30c. Also in Coal Age, Jan.20, 1912, p. 478; 3500 w; 20c.

Also in Spanish in Rev. Minera, Aug.1, 1911, p. 421; 4000 w; 50c.

Nelson, A.—*Methods of Detecting Principal Mine Gases, and Proportion of Air Required to Render Them Harmless.*—Sci. & Art of Mng., Apr.27,1912; p. 450; 1600 w*; 35c.

Rollandet, G. J.—*Detection of Gases in Mines;* [Turquand-Gray process for explosive mixtures in coal and other mines].—Mng. Sci., May30,1912; p. 471; 1500 w*; 20c.

Virgin, Jos.—*Another Method of Testing for Blackdamp;* [Dietz lantern].—Coal Age, Jan.13,1912, p. 457; 750 w; 20c.

Watteyne, V.—*L'evolution de l'éclairage dans les mines grisouteuses;* [Evolution of mine lighting in firedamp mines].—Asso. d. Ingrs. Sortis de Liège, Bull., Vol. 35, No. 2; pp. 78-81; $1.

Winstanley, G. H.—*Coal Mine Gases;* [Series of lectures on ventilation standards, firedamp and coal-dust, and safety-lamp as a gas detector; abstract].—Iron & Coal Trade Rev., March29,1912; p. 485; 3000 w; 35c.

"M--r," —. *Die Beleuchtung in den Schlagwettergruben;* [Lighting in gaseous mines].—Montanist. Rundschau, Dec.16, 1911, p. 1158; 1200 w; 45c.

M. E.—*Flame Tests for Firedamp.*—Sci. & Art of Mng., Apr.27,1912; p. 444; 1800 w*; 35c.

———. *Ein neues Verfahren zur Bekämpfen von Grubenexplosionen;* [New method of combating spread of firedamp explosions; quencher automatically released by initial pressure of explosion].—SW. Deu. Industrie Ztg., Feb.13,1912; p. 80; 500 w; 35c.

———. *Electricity and Firedamp;* [Discusses proposed English coal-mines bill].—El. Rev. (London), Dec.8.1911, p. 929; 2200 w; 35c.

———. *Entzündung von Gas durch elektrische Lampen;* [Ignition of mine gases by electric lights].—Zentral Verbd. Bergbau Betriebsl. Oestr., Zts; Apr.15,1912; p. 225; 4500 w; 45c.

———. *The Case Against the Canary;* [Decries value of warning of canaries in rescue work].—Coal Age, Feb.3,1912; p. 552; 1000 w; 20c.

———. *The Canary Bird;* [Application in mine rescue work].—Coal Age, Dec.9, 1911, p. 286; 1000 w; 25c.

———. *The "H. W. C." Apparatus for Instruction and Research in Gas-Testing.*—Colliery Guardn., Dec.15,1911, p. 1177; 2000 w*; 35c.

———. *The Simplification of Gas Testing in Mines.*—Iron & Coal Trades Rev., Dec.22,1911, p. 1026; 2500 w; 30c.

COAL DUST

See also under "Gases and Ventilation"; also under "Accidents."

Ashworth, J.—*Some Coaldust Explosion Problems;* [Read to S. Wales Inst. of Engrs.; abstract].—Coll'y Guardn., Jan.26, 1912; p. 179; 1200 w; 30c. Also in Coal & Coke Op., Apr. 4, p. 212; 1000 w; 20c.

Blackett, W. C.—*Sacriston Colliery, Durham; Use of Stone Dust in Relation to Coal Dust Ignition;* [Read to Natnl. Asso. of Coll'y Managers; N. of England branch].—Iron & Coal Trades Rev., March8,1912; p. 368; 2000 w; 30c.

Czaplinski, Dr., and Sicinsky.—*Versuche mit Kohlenstaub im versuchstolln des Ressitzer Steinkohlenceviers;* [Austrian coal dust experiments at the Ressitz experimental gallery; use of wet zones].—Oestr. Zts. f. Berg- & H-wesen, March30,1912; p. 171-177; May11, p. 253-260*; 65c.

English abstract in Mng. Engg., June, p. 83; 1000 w; 35c.

Futers, T. C.—*Automatic Sprinkling Apparatus for the Prevention of Dust in Mines.*—Coll'y Guardn., Jan.5,1912, p. 24; 1000 w*; 30c.

Galloway, W.—*Some Phases of the Coaldust Question;* [Presidential address, S. Wales Inst. of Engrs.].—Coll'y Guardn., Jan.26,1912, p. 175; Feb.2, p. 223; 8500 w; 30c. Also in Iron & Coal Trades Rev., Jan. 26,1912; p. 28; 7000 w; 30c. S. Wales Inst. of Engrs., Proc., 1912; No. 1; pp. 6-35*; $1.

Harger, J.—*Dust Explosions and their Prevention;* [Reduction of mine oxygen to 17%; read to Soc. of Chem. Ind'y; ab-

stract].—Coll'y Guardn., Feb.23,1912; p. 379; 3000 w; 30c. Also in Iron & Coal Trades Rev., Feb.23, p. 286; 2500 w; 30c. Also in Soc. of Chem'l Ind'y, Jnl., May15, p. 413; 4200 w; 65c.

Discussion before Manchester Geol. & Mng. Soc.; in Iron & Coal Trades Rev., March1,1912; p. 332; Apr.19, p. 612; 10,000 w; 50c. Also in Coll'y Guardn., March8, p. 477; Apr.19, p. 785; 6500 w; 50c.

German abstract in Techn. Blätter, March9,1912; p. 76; Apr. 20, p. 122; 4000 w; 50c. Also in Zts. f. Sprengstoffw., Apr. 15, p. 168; 1500 w; 35c.

Rice, Geo. S.—*Coal Dust Explosions;* [Abstr.; from U. S. Bureau Mines, Miners' Circular No. 3].—Iron & Coal Trades Rev., Sept.8,1911, p. 352; 3200 w; 35c.

In German in Zts. f. Sprengstoffwesen, Dec.1,1911, p. 447; 2000 w; 45c.

Rice, Geo. S.—*Description of Explosion Test at the Experimental Mine of the U. S. Bureau of Mines, Feb.* 24, 1912; [With stone dust].—Coal Trade Bull., March1, 1912; p. 38; March15, p. 35; 3500 w; 35c. Also in Black Diamond, March16, p. 18; 2400 w*; 30c. Also in Coal & Coke Op., March21, p. 181; 2400 w; 20c. Also in Canadian Mng. Jnl., April1, p. 231; 1800 w; 25c. Also in Coal Age, March2, p. 676; 1000 w; 20c. Also in Mines & Minerals, May, p. 596; 2000 w*; 35c. Also in Jnl. of Ind'l & Engg. Chemy., July, p. 488; 2000 w; 65c.

von Rosen, —. *Die Bekämpfung der Kohlenstaubgefahr in Frankreich;* [Dust treatment in French coal mines].—Bergbau, Dec.21,1911, p. 810; 3200 w; 35c.

Rybák, M.—*Die französischen Versuche mit Kohlenstaub in Liévin;* [The French coal-dust experiments at Liévin].—Oestr. Zts. f. Berg- & H-wesen, Feb.24,1912; p. 99; March2, p. 113; 7000 w; 75c.

Rybak, M.—*Bericht über eine Reise in den belgischen Kohlenrevieren;* [Excursion to the coal mining districts of Belgium; report on coal mining practice].—Berg & Hüttenm. Jahrb. Leoben-Pribram, Vol. 59, No. 3, 1911; pp. 195-242*; No. 4, pp. 291-334*; $3.

Schellenberg, F. Z.—*Comment on Professor Harger's Suggestion for the Prevention of Explosions.*—Coal & Coke Op., Apr. 25,1912; p. 261; 750 w; 25c.

Spiel, H.—*Ueber den heutigen Stand der Kohlenstaubfrage und Kohlenstaubbekämpfung;* [Present-day status of the coaldust problem].—Montanist. Rundschau, Dec.1, p. 1104; Jan.1,1912; p. 5; 10,000 w*; 65c.

Spiel, H.—*Anlage und Einrichtung von Kohlenstaub-Versuchsstationen unter Tag;* [Construction and equipment of coal-dust experiment stations underground].—Montanist. Rundschau, Apr.16,1912; p. 349; 179; Apr.24, p. —; 2500 w; 50c.

English abstract in London Mng. Jnl., Apr.20,1912; p. 400; 2000 w; 35c. 3700 w*; 45c.

Taffanel, J.—*Nouvelles expériences sur les poussières de houille et sur les moyens de combattre leurs dangers;* [New coal dust experiments at Liévin experiment station, France; final report on 4th series, 1910-1911].—Annales d. Mines, April,1912; pp. 259-378*; May, pp. 379-456*; June, pp. 469-550*; $1.70.

Taffanel, J., and A. Durr.—*Essais sur les Inflammations de Pouissières, IV;* [Reports on the French Coaldust Experiments at Liévin Experimental Mines, 4th Series, 1910-1911].—Paris, 1911, pp. —; $2; (book).

English abstract in Coll'y Guardn., Feb. 2,1912, p. 227; 4500 w*; 30c.

Italian abstract in Rassegna Mineraria, March21, p. 169; April1, p. 192; 7000 w; 50c.

Thornton, W. M.—*Experiments on Liquid Mixtures for Laying Coal Dust;* [read to N. of Engl. Inst. of Mng. & Mech. Engrs.; abstract].—Coll'y Guardn., Aug.11,1911, p. 273; Aug.18, p. 318; 8500 w; 40c; (discussion) Dec.15, p. 1181; 4000 w; 30c. Also in Iron & Coal Trades Rev., Aug.11,1911, p. 202; 7000 w*; 30c.; (discussion) Dec.15, p. 966; 5000 w; 30c. Also in Mng. Engg., Sept.,1911, p. 175; Oct., p. 204; 5500 w; 50c.

Thornton, W. M.—*Influence of Gas on Ignition of Coal Dust by Single Flashes;* [Asso. of Mng. Electr. Engrs., N. of Engl. branch; presidential address].—Iron & Coal Trades Rev., Dec.1,1911, p. 894; Feb. 16, p. 253; 2500 w*; 50c. Also in Coal Trade Bull., Dec.15,1911, p. 44; 2100 w; 25c. Also in Electrician, Dec.8, p. 343; 2000 w*; 35c. El. Rev. (London), Dec.15, p. 970; 1400 w; 35c.

Watteyne, V. and Em. Lemaire.—*Le bourrage extérieur en poussières incombustibles;* [External tamping with stone dusts to allay the danger of firedamp or coaldust explosions].—Annales d. Mines, Vol. 16, No. 4; 1911; pp. 937-998*; tables; 90c.

Abstract in English, Coll'y Guardn., Nov. 3,1911, p. 873, p. 879; 2000 w; 30c. Also in Coal & Coke Op., Nov.23, p. 321; 1200 w; 25c.

Abstract in German in Zts. f. . . Sprengstoffwesen, Jan.15,1912; p. 21; Feb. 1, Feb. 15, p. 72; 80c.

Spanish abstract in Rev. Minera, Apr.8, p. 166; 3000 w; 35c.

Young, C. M.—*Coal Dust Explosions and Quantity of Air.*—Mines & Minerals, Jan., 1912, p. 350; 1000 w; 35c.

E. L.—*Compositions destinées à abattre et à agglomérer les poussières de houille dans les mines;* [Saponifiers, oil and other solidifiers for coal dust in mines].—Génie Civil, Feb.24,1912; p. 332; 2000 w; 50c.

M. E.—*Explosions and Coal Dust.*—Sci. & Art of Mng., May25,1912; p. 484; 2400 w; 35c.

M. E.—*Coal Dust;* [Formation and removal].—Sci. & Art of Mng., June18,1912; p. 508; 2400 w; 35c.

———. *Das Stosstränken in Kohlenbergwerken;* [Overcoming the coal dust danger by drenching the coal face by drill holes].—Kali Erz & Kohle, March25,1912; p. 305; 1000 w; 35c.

———. *Fighting Coal Dust;* [Recent progress in various countries, with special reference to Harger's views].—Mng. Jnl., Apr.27,1912; p. 403; 1800 w; 35c.

———. *Mischungen zum Niederschlagen des Kohlenstaubes in den Steinkohlengruben;* [Mixtures for laying coal dust in mines].—Montan. Ztg., June1,1912; p. 204; 600 w; 35c.

———. *Mittel zur Bekämpfung der Kohlenstaubgefähr;* [Means of combatting the coal-dust danger].—Stein- & Braunkohle, May15,1912; p. 116; 1600 w; 35c.

———. *Tests with a Stone-Dust Zone in Explosions at the U. S. Experimental Mine.*—Coal & Coke Op., Feb.15,1912; p. 99; 750 w; 25c.

ELECTRICITY

See also under "Electricity" in chapter on Power and Machinery.

Carlow, C. A.—*Lessons to Be Learned from the Electrical Mining Accidents in Scotland in* 1910? [Read to Natnl. Asso. of Mng. Electr. Engrs.].—Iron & Coal Trades Rev., Dec.1, pp. ——; Feb.16,1912; p. 246; 10,000 w; 50c.

Kopplin, —. *Gefährdung der Schiessarbeit mit elektrischer Zündung durch den elektrischen Grubenlokomotivbetrieb;* [Dangers of electric blasting in mines using electric haulage].—Glückauf, May25,1912; p. 821-824*; 50c.

Lauffer, C. A.—*Electrical Accidents and Their Treatment;* [from "Electric Jnl."].—Amer. Industries, Sept.,1911, p. 19; 2200 w; 35c. Also in Australian Mng. Standd., Nov.9, p. 470; 2100 w; 35c. Also in Practl. Engr., Jan.15,1912, p. 69; 2000 w; 25c.
Spanish abstract in Mex. Mng. Jnl., June, 1912; p. 60; 2000 w; 25c.

Nelson, A.—*Method of Restoring Consciousness after Electric Shock.*—Sci. & Art of Mng., Dec.23,1911, p. 236; 1000 w*; 35c.

Phelps, H. M.—*Safeguarding the Use of Electricity in Mines.*—Coal Age, May11, 1912; p. 1006; 1500 w; 20c.

———. *Installation and Use of Electricity in Mines;* [Text of new British rules].—Coll'y Guardn., March1,1912; p. 431; 2000 w; 30c. Also in Iron & Coal Trades Rev., Feb.23, p. 280; 2500 w; 30c.

———. *Protective Devices Required Under the New Electrical Rules;* [British; leakage indicators for high and low tension; waterproof ammeters; spark gap; lightning arrester].—Coll'y Guardn., March 1,1912; p. 428; 1000 w*; 30c.

———. *Some More Electrical Don'ts.*—Coal Age, Jan.20,1912, p. 487; 1500 w; 20c.

FIRE; INFLAMMABLES; EXPLOSIVES

See also under "Transportation; Handling; Storage" in last chapter.

Ashworth, Jas.—*Notes on Underground Mine Fires;* [Studies on causes of propagation, and handling].—Coal Age, March2, 1912; p. 668; 3200 w*; 20c. Reprinted in Mng. Engg., April, p. 26; 35c.

Burrell, Geo. A., and F. M. Seibert.—*Gas Analysis as an Aid in Fighting Mine Fires.*—U. S. Bur. Mines, Technical Paper No. 13, 1912; 16 pp.*; 10c. Abstract in Mng. Sci., June6, p. 493; 2100 w*; 20c.

Denison, P. N.—*Accidents from Dynamite;* [and their prevention].—Rock Products, Apr.22,1912; p. 36; 750 w; 30c.

Dobbelstein, O.—*Die Unfallgefahr bei der Schiessarbeit mit elektrischer Zündung und mit Zündschnurzündung;* [The liability to accident in electric vs. fuse blasting].—Glückauf, Apr.13,1912; p. 594; 1200 w; tables; 45c.

Flachs, Dr.—*Ueber Benzinexplosionen; ihre Entstehung und Verhütung;* [Benzine explosions, their origin and prevention].—Allg. Oestr. Chemiker Ztg., Jan.15,1912, p. 9; 2000 w; 35c.

Hasse, —. *Bekämpfung eines Grubenbrandes im Schachtsicherheitspfeiler durch Spülversatz;* [The fire in the shaft-safety pillars of the Oberhausen colliery, and its control by packing].—Kohle & Erz, Jan.22, 1912, p. 79; 1200 w; 35c.

Heys, W.—*Symptoms and Treatment of Gob Fires.*—Sci. & Art of Mng., Jan.20, 1912, p. 287; 1600 w*; 35c.

Heys, W.—*Methods of Working a Seam Subject to Spontaneous Combustion so as to Secure Maximum Safety.*—Sci. & Art of Mng., June8,1912; p. 526; 1000 w*; 35c.

Newberry, A. W.—*Pumps for Fire Protection;* [Connections with air lines for fire service].—E. & M. J., June1,1912; p. 1075; 500 w*; 25c.

Pickering, W. H.—*Gob Fires in the South Yorkshire Coalfield.*—Coll'y Guardn., Jan. 12,1912, p. 89; 2000 w; 30c. Also in Iron & Coal Trades Rev., Jan.12, p. 54; 2000 w; 30c. Also in Coal & Coke Op., Feb.8, p. 86; 1200 w; 25c. Also in Mng. Engg., Feb., p. 303; 2000 w; 35c. Also in Coal Age, Feb. 17, p. 614; Feb.24, p. 643; 1800 w; 30c.

Redmayne, R. A. S.—*Spontaneous Combustion in Coal Mines;* [Causes and remedies; mine fires; extracts from report on Jammage explosion].—Iron & Coal Trades Rev., May3,1912; p. 684; 2000 w; 35c. Also in Mng. Engg., June, p. 76; 2000 w; 35c.

Rzehulka, A.—*Brand auf und in Bergwerken;* [The fire problem in mines, above and under ground].—Stein- & Braunkohle, Apr.1,1912; p. 79; 3000 w; 35c.

Simpson, C.—*Precautions Before Using Explosives on the Permissible List.*—Sci. & Art of Mng., May11,1912; p. 472; 600 w; 35c.

Walker, S. F.—*Notes on New Machinery for South Africa; Klinger's Motor-Car Fire Pump.*—S. Afr. Engg., April,1912; p. 69; 300 w*; 35c.

Williams, H.—*Oil-Fire Extinguishers for Naval Vessels.*—Engg. News, May16,1912; p. 921; 1000 w; 25c.

Williams, R. Y.—*Extinguishing the Majestic Mine Fire;* [Use of helmets in Franklin county, Ill.].—Mines & Minerals, Jan., 1912, p. 342; 3000 w*; 35c.

Wilson, H. M.—*Water Supply for Fire Protection in Mines;* [Read to Natnl. Fire Protection Asso., Chicago, May,1912; extracts from first report of mine-fires committee].—Engg. News, May30,1912; p. 1041; 500 w; 25c. Also in Coal & Coke Op., July4, p. 429; 2100 w; 25c. Also in M. & S. P., Aug.10, p. 171; 2200 w; 20c.

Wyman, T. B.—*The Relations of the Mining Industry to the Prevention of Forest Fires.*—Lake Superior Mng. Inst., Proc., 1911; pp. 211-217.

———. *"Don'ts" Governing Handling of Explosives in Mines;* [Rules of Oliver Iron Mng. Co.].—Mining & Engg. World, Apr.27, 1912; p. 914; 500 w; 10c.

———. *Sealing Off a Mine Fire;* [Open discussion; 32 replies].—Coal Age, Feb.3, 1912; p. 553; Feb.10, p. 583; Feb.17, p. 617; Feb.24, p. 649; 13,000 w*; 50c.

SAFETY IN HAULAGE AND HOISTING

See also under Haulage, Hoisting, and Cables.

Bauer, K.—*Sicherheitsvorrichtungen gegen Seilbruch bei Schachtförderungen und Aufzügen;* [Safety devices against the breaking of hoisting cables].—Bauwelt, No. 98, 1911; pp. 29-32*; 75c.

Fischer, F. L.—*Shaft Station Safety Gates.*—E. & M. J., June15,1912; p. 1175; 500 w*; 25c.

Herberts.—*Betriebsbedingungen für Personenaufzüge;* [Requirements in hoisting passengers in Germany].—Fördertechnik, April,1912; 4 pp*; 65c.

Heys, W.—*Precautions on Self-Acting Inclines to Prevent Mine Wagons from Running Away.*—Sci. & Art of Mng., March 2,1912; p. 358; 1500 w*; 35c.

Ives, L. E.—*Safety Devices for Hoisting through Inclines.*—E. & M. J., March9,1912, p. 485; 1200 w; 25c.

Nirtl, G.—*Eine neue, vom Förderseil unabhängige Fangvorrichtung für Förderschalen;* [New safety catch for hoisting cages, acting independently of the cable].—Zentral Verbd. Bergbau Betriebsl. Oestr., Zts., Feb.1,1912; p. 72; 1200 w*; 45c.

Rice, C. T.—*Safety Appliances in Inclines*; [Runaway prevention at Gagnon inclined shaft, Butte, Mont.].—E. & M. J., Apr.27,1912; p. 286; 1200 w; 25c.

Speer, —. *Die Sicherheit der Förderseile;* [Studies on the safety factor of hoisting cables].—Glückauf, May11,1912; pp. 737-747*; May18, pp. 781-788*; May 25, pp. 824-830; June1, pp. —; $1.25.

Wallichs, A.—*Die neuere Entwickelung der Fördermaschinenantriebe und der Sicherheitsvorrichtungen;* [Newer developments in the driving of electric and steam hoists and hoist-safety appliances].—Ver. Deu. Ingr., Zts., Dec.2,1911, p. 2002; Dec. 9, p. —; 6000 w*; $1.00.

Wintermeyer, —. *Sicherheitsvorrichtungen (Fahrtregler) für Dampfördermaschinen mit mechanischer Regelung;* [Safety devices (controllers) for steam hoists].—Kohle & Erz, May6,1912; p. 434; 5000 w*; 35c. Also in Dingler's Polytechn. Jnl., May25,1912; pp. 325-327; June; 75c.

———. *A New Safety Catch for Mine Shafts;* ["Tenax" device].—Coll'y Guardn., Jan.19,1912, p. 128; 1000 w*; 30c.

———. *Testing the Safety Devices on Mining Cages;* [Trips to prevent descent of cage in case of cable breakage].—Engg. Record, June8,1912; p. 622; 500 w*; 25c.

FLOODING PROBLEM

See also under "Mine Waters"; also under "Petroleum" (Water problem in oil Fields).

Hughes, W. T.—*Approaching Old Workings;* [Heading and Drill-hole practice to prevent possible inundations].—Sci. & Art of Mng., May11,1912; p. 477; 500 w*; 35c.

GENERAL; MISCELLANEOUS

Beyer, D. S.—*Safety Considerations in Industrial Engineering.*—Engrs. Soc. of W. Penn., Proc; April,1912; 88½ pp*; 75c.

Beyer, D. S.—*Safety Provisions by the U. S. Steel Corporation.* — Smithsonian Instn., Annl. Rep. f. 1910; 1911; pp. 211-231*; $1.00.

Briggs, H.—*Profit and Safety in Mining;* [Presidential address, Scottish Federated Inst. of Mng. Students, Eastern Branch].—Iron & Coal Trades Rev., Feb.9,1912; p. 203; 4000 w*; 30c.

Coulson, R. H.—*Accidents and Safety Measures in Cornish Mines.*—E. & M. J., Jan.20,1912, p. 165; 750 w; 25c.

Gow, A. M.—*Some Safety Devices of the Oliver Iron Mining Co.*—Lake Superior Mng. Inst., Proc., 1911; pp. 156-167*.

Holmes, Jos. A.—*Some Lessons from Recent Mine Disasters;* [Read to S. Appalachian Coal Operators' Asso.].—Coal Trade Bull., March1,1912; p. 30; 3600 w; 20c. Also in Coal & Coke Op., March7, p. 145; 3500 w; 20c. Also in Los Angeles Mng. Rev., March9, p. 145; 3500 w; 20c. Also in Mines & Minerals, April, p. 525; 3200 w; 35c. Also in M. & S. P., March30, p. 462; 1200 w; 20c. Also in Black Diamond, May4, p. 16; 2500 w; 30c.

Libert, J. and Al. Delmer.—*Les congrès des associations pour la surveillance des appareils à vapeur de Bruxelles,* 1910; [The international congress of boiler and steam engine inspection; resumé of papers of interest on the safety question].—Annales d. Mines (Belgiq.), Vol. 17, No. 2; 1912; p. 525-540; 95c.

Tobey, C. E.—*Preventive Methods, Lackawanna Co.;* [Rules for maintaining safety of operation in mines].—Coal Age, March9, 1912; p. 721; 1500 w*; 20c.

Tobey, C. E.—*A Novel Campaign Against Anthracite Mine Accidents;* [Educational, welfare and first-aid work; read to Penn'a. State Y. M. C. A. convention, Feb.,1912].—Coal Trade Bull., June15,1912; p. 47; 3600 w; 25c.

Wilcox, L. L.—*Safety Appliances in Mines;* [Devices and equipment in Republic Iron & Steel Co. works].—E. & M. J., Jan. 27,1912, p. 209; 1000 w; 25c.

———. *Danger Periods in Mines* [coincident with seismic disturbances].—Coal Age, Dec.16,1911, p. 317; 1500 w; 25c.

———. *Water Purification for Collieries.*—Coal Age, March30,1912; p. 804; April6, p. —; 5000 w*; 30c.

Hygiene in Mills, Metallurgy, Transportation, etc.

Bergquist, J. G.—*Methods and Appliances for Prevention of Accidents in Cement Plants.*—Rock Products, Apr.,1912; p. 33; p. 45; 2500 w*; 30c.

Beyer, D. S.—*Safety Considerations in Industrial Engineering.*—Engrs. Soc. of W. Penn., Proc; April,1912; 88½ pp*; 75c.

Beyer, D. S.—*Safety Provisions by the U. S. Steel Corporation.* — Smithsonian Instn., Annl. Rép. f. 1910; 1911; pp. 211-231*; $1.00.

Bolling, R. C.—*Rendering Labor Safe in Mine and Mill;* [Sanitation, safety and welfare work of U. S. Steel Corp.].—Iron Trade Rev., June6,1912; p. 1237; 3000 w; 20c.

Bolling, R. C.—*Accident Prevention by the U. S. Steel Corporation.*—Amer. Industries, Jan.,1912; p. 23; 2000 w*; 25c.

Breyre, Ad.—*Les asphyxies par les gaz des hauts-fourneaux;* [Gas asphyxiation in blast-furnaces, and review of such accidents in Belgium 1906-1911].—Annales d. Mines (Belgiq.), 1912; No. 1; pp. 65-156*; 95c.

English abstract in Iron & Coal Trades Rev., May17,1912; p. 810; 2800 w*; 35c.

Cameron, W. H.—*The Prevention of Accidents in Foundries;* [Read to Pittsburgh Foundrym. Asso., April1,1912; abstract].—Iron Age,April4,1912; p. 883; 5000 w*; 30c. Also in Iron Trade Rev., April,11, p. 806; 5000 w; 20c. Also in Castings, April, p. 9; 4200 w; 25c.

French abstract in Métallurgie, May29, p. 339; June5, p. —; 1200 w; 50c.

Frey, —. *Neuere Fortschritte in der Hygiene des Hüttenwesens und Bergbaus in Deutschland;* [Newer progress in mining and metallurgic hygiene in Germany].—Schrift. Gerichtl. Med., 1st Supplement, Jan.,1912; pp. 113-142.

von Gumberz, A.—*Ferrosilizium Explosionen und ihre vermutlichen Ursachen;* [Ferro-silicon explosions and their causes].—Stahl & Eisen, Feb.15,1912; p. 267; 3500 w; 75c.

Hamilton, Dr. Alice.—*Pathological Conditions in the American White Lead Industry;* [from U. S. Bureau of Labor, Bull. 95].—Mng. Sci., Dec.21,1911, p. 554; 1000 w; 20c.

Hammond, E. K.—*Safeguards for Electric Cranes.*—Iron Age, May30,1912; p. 1336; 1600 w*; 30c.

Jicinsky, L.—*Anleitung zur ersten Hilfeleistung in Gruben und Hütten;* [Introduction to First-Aid in Mines and Metallurgic Works].—Ostrau, Moravia; 1912 (2d edition); 224 pp; 87 figs; $1 (book).

Krantz, Fr.—*Die Entwickelung der oberschlesischen Zinkindustrie in technischer,*

wirtschaftlicher und gesundheitlicher Hinsicht; [Development of the zinc industry in Upper Silesia from the technical, industrial and sanitary points of view].—Kattowitz, 1911; 96 pp*; $2.50; (book).

Maukisch, —. *Spezielle Berufsstatistik und Berufshygiene (Gewerbehygiene) auf der internationalen Hygiene-Ausstellung Dresden* 1911; [Industrial Hygiene and Statistics at the International Hygiene Exhibit at Dresden, 1911].—Berlin, 1912; 53 pp; $1 (book).

Miller, H.—*The White-Lead Problem;* [Development in countries of continental Europe; read to London Paint & Varnish Soc., Dec.14,1911; German abstract].—Chemiker Ztg., Feb.20,1912; p. 200; 1000 w; 30c.

Rambousek, J.—*Gewerbliche Vergiftungen;* [Industrial Poisonings; Their manner of occurrence, symptoms, treatment and prevention].—Leipzig, 1911; 431 pp.; $4.50: (book).

Teleky, L.—*Die gewerbliche Quecksilbervergiftung;* [Industrial poisoning by mercury; researches made in Austria].—Berlin, 1911; 228 pp; 31 figs; $3 (book).

Thompson, W. G.—*Occupational Poisoning in the Chemical Trades;* [Read to Amer. Chem. Soc., N. Y. section; March, 1912].—Jnl. of Ind'l & Engg. Chem'y, June, 1912; p. 454; 3500 w; 65c.

———. *Accident Prevention in Steel Plants.*—Iron Age, Jan.4,1912; p. 30; 9000 w*; 65c.

———. *How Cambria Steel Co. Safeguards its Employes;* [Devices in iron and steel plants at Johnstown, Pa.].—Iron Trade Rev., June13,1912; p. 1269; 2100 w*; 20c.

———. *Perjuicios ocasionados por los derrames de las plantas de cianuracion;* [Methods of waste-cyanide disposition at various leading cyaniding works in Mexico].—Mex. Inst. of Mng. & Met'gy, Vol. II. No. 4,1911. p. 105; No. 5, p. 154; 10,000 w [in both English and Spanish]; $1.

Extracts in Mng. Sci., Oct.5,1911, p. 321; 2800 w; 20c. Also in Metgl. & Chemi. Engg., Nov.,1911, p. 588; 2500 w; 35c.

———. *Physiological Effect of Vanadium.*—Mining & Engg. World, Jan.6,1912; p. 3; 500 w; 10c.

———. *Poisoning by Cyanide;* [Prevention and treatment; Transvaal commission notes].—Mining & Engg. World, Dec. 16,1911, p. 1212; 500 w; 10c.

———. *Prevention of Industrial Accidents;* [Recent work of Amer. Museum of Safety].—Iron Age, Jan.18,1912; p. 188; 1500 w*; 30c.

———. *Suggestions for Preventing Foundry Accidents.*—Foundry, May,1912; 3½ pp*; 50c.

———. *The Hygienic Side of Foundry Equipment.*—Castings, March,1912; p. 176; 1300 w; 25c.

DUST PROBLEM

Danneberg, E.—*Neuzeitliche Lüftungs-, Entstaubungs- und Luftheizungs-Anlagen in Giessereibetrieben;* [Newer developments in ventilation, dust-freeing and warming of foundry works; read to Ver. Deu. Giessereifachleute, Berlin section].—Giesserei Ztg., Jan.1,1912; p. 1; 5500 w*; 45c.

Guillemain, C.—*Theorie und Praxis der Staubverdichtung und der Reinigung und Entstaubung von Gasen;* [Theory and practice of dust concentration and the purification and dust-freeing of gases].—Halle, 1911; 54 pp.; $1; (book).

Polster, —. *Neuere Entstaubungseinrichtungen auf rheinischen Braunkohlenbrikettfabriken;* [Dust-control devices in the lignite briquet works of the Rhine].—Braunkohle, Dec.22,1911, pp. 597-603*; Dec.29, p. 613-621*; Jan.12,1912, p. 645-648*; $1.50.

Schott, O.—*The Dust Problem in Portland Cement Plants and Its Solution;* [Read to Amer. Soc. Mechl. Engrs., Dec., 1911].—Engg. News, Jan.18,1912; p. 110; 5000 w; 25c.

Verbouwe, —. *Installation pour l'aspiration et la récupération des poussières du triage au puits Le Fief;* [Sturtevant aspirator for recovering coal dust about screens and sorting plants; installation at Le Fief colliery, Belgium].—Annales d. Mines (Belgiq.), Vol. 17, No. 2, 1912; p. 401; 1200 w*; 95c.

Zink, R. J.—*Ueber die Entstehung und Verhüttung von Aluminiumstaubexplosionen;* [Origin and prevention of aluminum-dust explosions].—Chemiker Ztg., Dec.12, 1911, p. 1370; 2400 w; 35c.

———. *Die Enstaubung von Tonwarenfabriken;* [Overcoming dust in clay-products works].—Ton-industrie Ztg., Dec.21, 1911, p. 1793; 500 w; 35c.

LABOR; MANAGEMENT; SOCIOLOGICAL

Bond, J.—*Men Versus Machines;* [Comparative costs and efficiency in sinking and driving].—Mex. Mng. Jnl., March,1912; p. 17; 2000 w; 25c.

Bulman, H. F.—*The Attitude of Labor; A Review.*—Coll'y Guardn., March22,1912; p. 583; 5000 w; 30c.

Collins, C. A.—*Efficiency Engineering Applied to Mining.*—Mining & Engg. World, Apr.20,1912; p. 869; 2200 w; 10c.

Eye, C. M.—*Is "Cheap" Labor Economical?* [Discusses gold mining and milling in Philippines].—M. & S. P., March30,1912; p. 476; 1500 w; 20c.

Finlay, J. R.—*The Relation Between Mining and Civilization;* [Commencement address, Mo. School of Mines, May31,1912; abstract].—Mining & Engg. World, June15, 1912; p. 1239; 3000 w; 10c. Also in M. & S. P., June15, p. 820; 3500 w; 20c.

Heym, W.—*Die Arbeitsverteilung in Gruben bitumenhaltiger Kohle;* [Labor problems and labor classification in the bituminous coal mining industry].—Kali Erz & Kohle, Jan.25,1912; p. 87; 1800 w; 35c.

Horth, H. H.—*Beschreibung von Arbeiterverhältnissen und Fabrikationseinrichtungen in Amerika;* [Conditions of labor, wages and equipment in foundries and metallurgic works in America compared with Germany].—Giesserei Ztg., May15, 1912; p. 310; 1400 w; 35c.

Knox, Geo.—*The Training of Mine Officials;* [Read to Wigan & District Inst. of Mng. Engrs.].—Coll'y Guardn., Jan.19,1912, p. 124; 3500 w; 30c. Also in Iron & Coal Trades Rev., Jan.26, p. 139; 3000 w; 30c. Also in Coal Trade Bull., Feb.1, p. 51; 3000 w; 25c. Also in Coal & Coke Op., Apr.4, p. 209; 2400 w; 20c.

Lauck, W. J.—*Labor Conditions in Arizona Smelters.*—M. & S. P., Feb.3,1912; p. 212; 750 w; 20c.

Lauck, W. J.—*Immigrant Gold-Mine Workers in Amador County, Cal.*—M. & S. P., Feb.17,1912; p. 279; 1200 w; 20c.

Lauck, W. J.—*Efficiency of the Bituminous Coal Mine Employe;* [In Pennsylvania, chiefly].—Mining & Engg. World,

Jan.20,1912, p. 117; 2700 w; 10c. Abstract in Coal Trade Bull., Feb.1, p. 43; 2700 w; 25c.

Lauck, W. J.—*The Metal Miners of the Butte District, Mont.*—Mining & Engg. World, Feb.3,1912; p. 299; 2300 w; 10c.

Lauck, W. J.—*Iron-Ore Mines on Mesabi and Vermilion Ranges;* [Labor conditions and nationalities of employes].—Mining & Engg. World, Dec.23,1911, p. 1269; 2000 w; 10c.

Lauck, W. J.—*Employes of the Smelting and Refining Industries;* [Nationality of laborers in western works].—Mining & Engg. World, Dec.30,1911, p. 1327; 2200 w; 10c.

Lauck, W. J.—*Nationality of the Metaliferous Miner of the West.*—Mining & Engg. World, Jan.6,1912, p. 21; 2100 w; 10c.

Lauck, W. J.—*Nationality of Miners of the Alabama Iron-Ore District.*—Mining & Engg. World, Feb.17,1912; p. 402; 500 w; 10c.

Lauck, W. J.—*The Iron-Ore Miner of Northern Michigan.*—Mining & Engg. World, March9,1912; p. 559; 3000 w; 10c.

Pitaval, R.—*Le problème de la main-d'oeucre dans les mines;* [Problem of hand labor in mines, especially in France].—Echo d. Mines, Apr.25,1912; p. 498; 1000 35c. Reprint in Soc. Amicale Ecole Doual; Bull.; April10, p. 208; 1500 w; 35c.

Rice, C. T.—*Labor Conditions at the Calumet & Hecla, Mich.*—E. & M. J., Dec.23, 1911, p. 1235; 4000 w*; 25c.

Spence, Geo.—*"Cheap" Labor Economical?* [Discusses efficiency of cheap Mexican labor.—M. & S. P., March23,1912; p. 442; 1800 w; 20c.

Weatherbee, D'Arcy.—Labor Conditions on the Lower Amur; [Kolchan gold-dredging area].—Mng. Mag., March,1912; p. 197; 1500 w*; 35c.

———. *Rand Labor, An Urgent National Question; Working Conditions on the Witwatersrand Goldfields.*—Afr. World, Feb.24,1912; p. 128; 3000 w; 35c.

———. *Record Mine Outputs; Who is Responsible?* [Workman vs. machinery as factors in American records per man employed].—Mining & Engg. World, Apr.13, 1912; p. 803; 1200 w; 10c. Reprinted in Coal & Coke Op., Apr.25, p. 266; 25c.

Sociology; Welfare Work

Boag, F. A.—*Colliery Villages.*—Coal Age, Feb.10,1912; p. 588; 1200 w; 20c.

Bolling, R. C.—*Rendering Labor Safe in Mine and Mill;* [Sanitation, safety and welfare work of U. S. Steel Corp.].—Iron Trade Rev., June6,1912; p. 1237; 3000 w; 20c.

Ewing, S.—*Hillside Dwellings for Workingmen;* [Pittsburgh district].—Cassier's Mag., March,1912; p. 281; 1000 w*; 35c.

Herbig, Dr. — *Bergarbeiterfragen und Bergbau; 1, Bergbau und öffentliches Interesse;* [Mining problems and mining; 1: Relation between mining industry and the public interests].—Deu. Bergwerks Ztg., Suppl. No. 1, Oct.7,1911, p. 1; 1800 w; 35c. Part 2 in Techn. Blätter, Feb.24,1912, p. 58; 4000 w; 35c.

Holmes, J. A.—*Education to the Miner as a Worker and Citizen;* [Read to 44th annual convention of Y. M. C. A. of Pennsylvania, Feb.23,1912].—Coal & Coke Op., Apr.11,1912; p. 229; 1500 w; 25c.

Jabavu, J. T.—*The South African Union and the Natives.*—Afr. World, Dec.20,1911, p. 297; 3000 w*; $1.50.

Lantz, Chas. H.—*Successful Store Management in Relation to Coal Mining Communities;* [Read to W. Va. Coal Mng. Inst.; abstract].—Coal Age, June8,1912; p. 1137; 800 w; 20c.

Lawrence, C. E.—*Social Surroundings of the Mine Employe.*—Lake Superior Mng. Inst., Proc., 1911; pp. 121-126.

McKee, C. L.—*Alcoholic Drink in Coal Mining Villages.*—Coal & Coke Op., Feb.8, 1912; p. 85; 1200 w; 25c.

McVail, J. C.—*Housing of Scottish Miners.*—Coal Age, Apr.20,1912; p. 921; 2100 w*; 20c.

Metzner, Max.—*Die soziale Fürsorge im Bergbau;* [Social Welfare Work in Mining, especially in Prussia, Saxony, Bavaria and Austria].—Jena, 1911; pp. —; (book).

Meyer, G. A.—*Die Bekämpfung des Missbrauchs geistiger Getränke im rheinisch-westfälischen Steinkohlenbergbau;* [The liquor problem in the Rhine-Westphalian coal fields].—Glückauf, Jan.20,1912, pp. 108-115; 50c.

Perkin, Jos.—*Colliery Cottages and Surface Buildings;* [Abstract; read to Natnl. Asso. of Coll'y Managers].—Iron & Coal Trades Rev., Dec.22,1911, p. 1022; 2500 w*; 30c. Also in Mng. Engg., Feb.,1912; p. 301; 1700 w; 35c.

Ross, W. H. and R. C. Benner.—*Disinfecting Miners' Dwellings.*—M. & S. P., Dec. 30,1911, p. 829; 2800 w; 20c.

Rücker, F.—*Wohnung und Verpflegung ausländischer Arbeiter;* [The housing and retaining of foreign employes at brick works in Germany].—Ton-Industrie Ztg., March9,1912; p. 432; 3200 w; 25c.

Spencer, F. W.—*The Native Problem in South Africa.*—Afr. World Annual, Dec., 1911, p. 293; 2200 w; $1.50.

Tupper, C. A.—*Welfare Work in German Industries.*—Iron Age, Jan.25,1912, p. 239; 4000 w*; 30c.

G.—*Der Bergmann als Sparer;* [The miner as a saver; savings bank deposits in Rhein-Westphalia coal fields].—Deu. Bergwerks Ztg., Apr.30,1912; p. 1; 1000 w; 35c.

———. *Die Bekämpfung des Missbrauchs geistiger Getränke im rheinisch-westfälischen Steinkohlenbergbau;* [Combating the liquor habit among Rhenish coal miners].—Deu. Bergwerks Ztg., Jan.31, 1912, p. 1; Feb.1, p. 1; Feb.2, p. 1; 3600 w; 65c.

———. *Employes' Welfare Work in Lake Superior Iron Region.*—Mining & Engg. World, Feb.17,1912; p. 391; 750 w; 10c.

———. *Helping the Workingmen to Help Themselves;* [Welfare work of Cambria Steel Co.].—Iron Trade Rev., June6, 1912; p. 1213; 5000 w*; 20c.

———. *Pensioning Employes on the Lake Superior Iron Ranges.*—Mining & Engg. World, Feb.3,1912; p. 280; 400 w; 10c.

———. *Working Conditions in the Mines of England.*—Black Diamond, March 30,1912; p. 18; 2500 w*; 30c.

———. *Wohnungsverhältnisse in westfälischen Städten;* [Statistics of dwelling houses in Westphalian towns].—Glückauf, Feb.24,1912, pp. 306-311; 4000 w; tables; 45c.

Time Checking Systems

Beissel, —. *Einführung der Karten-Grube Eschweiler-Reserve bei Nothberg;*

[Card-index time-keeping system at the Eschweiler-Reserve colliery, Prussia].—Glückauf, May4,1912; p. 710-714*; 50c.

Davidson, W. A.—*Mine Registration and Checking.*—Coal Age, Apr.27,1912; p. 934; 1200 w*; 20c.

———. *Versuche und Verbesserungen beim Bergwerksbetriebe,* 1911; [Innovations and improvements in mining practice in Prussia in 1911; card-index time-keeping system at Louisenthal, Saar].—Zts. f. d. Berg-, H-, & Salinenw., Vol. 60, No. 1; 1912; pp. 141-143*; $1.50.

Management; Inspection

Beard, J. T.—*The Election of Mine Inspectors.*—Coal Age, Apr.20,1912; p. 903; 3600 w; 20c.

Chase, Chas. A.—*Principles and Problems of Mine Management;* ["Practical Talks" to miners under auspices of Colo. Scient. Soc.].—Mines & Methods, Feb., 1912; p. 413; 5000 w; 25c. Also in Mex. Mng. Jnl., April, p. 21; 6000 w; 25c.

Clemons, M. J.—*The Fireboss Question, a Mine Superintendent's View.*—Coal Age, March30,1912; p. 819; 1500 w; 20c.

Conner, E. T.—*"Wanted—Coal Mine Managers."*—Mines & Minerals, Apr.,1912; p. 526; 700 w; 35c.

Foster, D. F.—*Labor and Superintendence on the Gold Coast.*—M. & S. P., Feb.3, 1912; 2000 w*; 20c.

Laing, J.—*Requirements in a Mine Foreman;* [abstract; read to W. Va. Coal Mng. Inst., Dec.,1911].—Coal & Coke Op., Dec.21, 1911, p. 406; 1200 w; 25c. Also in Coal Trade Bull., Jan.15, p. 27; 2500 w; 25c.

Ludlow, E.—*Mine Management Diagram.* —Mines & Minerals, Feb.,1912; p. 411; 400 w*; 35c.

Reynolds, Sim and W. H.—*Scientific Coal Mine Management.*—Mines & Minerals, March,1912; p. 459; 1800 w; 35c.

Schneider, Geo. W.—*The Efficiency Sense in Mine Management;* [Lecture at Leadville, Colo.].—Mng. Sci., March28,1912; p. 292; 2000 w; 20c.

Schneider, G. W.—*The Application of Business Principles to Mining.*—Colo. School of Mines Mag., March,1912; p. 119; 4000 w; 45c. Reprint in Mex. Mng. Jnl., April 1, p. 42; 25c. Also in Mines & Methods, Apr., p. 461; 25c.

Steele, J. H.—*The Advantages of the College-Trained Engineer.*—Pahasapa, Feb., 1912; p. 5-9; 50c.

Taylor, E. C.—*How to Maintain Discipline in a Coal Mine.*—Black Diamond, May11,1912; p. 20; 2000 w; 30c.

Unsworth, J.—*The Duties and Responsibilities of Colliery Managers under the Coal Mines Act,* 1911; [British; read to Natnl. Asso. of Coll'y Managers; abstract].—Iron & Coal Trades Rev., March8,1912; p. 368; 1500 w; 30c.

Wiedenfeld, K.—*Das persönliche im modern Unternehmertum;* [The personal factor in management and in modern industrial undertakings; German vs. English and American practice in large corporations].—Leipzig, 1911; pp. —; $1.50 (book).

———. *The Selection of State Mine Inspectors;* [Opposes political election].—Mines & Minerals, June,1912; p. 634; 1200 w; 35c.

———. *The Workman and the Manager;* [Plea for closer communication].—Coll'y Guardn., Feb.16,1912; p. 337; 2000 w; 30c.

Wages; Hours; Strikes; Unions

Bréchignac, J.—*La Mine aux Mineurs de Monthieux, Loire;* [The Miners' Co-Operative Mine at Monthieux, Loire; Its Rise and Failure; doctorate thesis].—Lyon, France, 1911; pp. —. Brief review in Soc. de l'Ind. Minrl. St. Etienne, C-R., Sept.,1911, p. 555; 400 w; 75c.

Cole, E. L.—*Anthracite Coal Strike Situation;* [Discusses conditions of organization and aims of anthracite workers].—Coal Age, Feb.17,1912; p. 601; 3000 w*; 20c.

Dinsmoor, A.—*The Run of Mine System in Illinois;* [Payment of workers by gross ton].—Coal Age, March9,1912; p. 705; 1200 w; 20c.

Evans, D.—*Labor Strife in the South Wales Coalfield,* 1910-1911.—Cardiff, 1911, pp. —; $1.25; (book).

Fillunger, Dr.—*Der Minimallohn beim Bergbau;* [The principle of minimum wage in mining].—Montan Ztg., Apr.1,1912; p. 126; 1500 w; 35c.

Fotheringham, J.—*The Minimum Wage; a New Zealand Example.*—Coll'y Guardn., Feb.23,1912; p. 388; 1000 w; 30c.

Geralia, P.—*Anthracite Miners Accept Proposed Agreement;* [Solution of 1912 anthracite-miners controversy]. — Black Diamond, May25,1912; p. 15; 5000 w; 30c.

Harmant, E.—*Die bisherigen Wirkungen des Gesetzes über die Beschränkung der Arbeitszeit in den belgischen Bergwerken;* Results to date of the law limiting the working day in Belgian mines; read to Soc. d'Economie Sociale Belge; abstract].—Montan. Ztg., May1,1912; p. 164; May15, p. —; 5000 w; 50c.

Hautpick, E.—*Russia; Lena Goldfields Strike.*—Mng. Jnl., Apr.20,1912; p. 374; 1000 w; 35c.

Herbig, —. *Bergarbeiterfragen und Bergbau; III: Die Leistung;* [The miner and mining problems; 3: Work performance, capacity of the miner and standards of measurement].—Techn. Blätter, May11, 1912; p. 145; 2500 w; 35c.

Imbusch, Heinr.—*Bergarbeiter-Streik im Ruhrgebiet im Frühjahr* 1912; [The miners' strike in the Ruhr coalfields, Prussia, spring of 1912].—Cologne, 1912 (6th edition); 80 pp.; $1 (book).

Jacobs, E.—*Permanent Board of Arbitration;* [Western Coal Operators' Asso. of Canada and District 18, U. M. W. of Amer.].—Coal Age, June1,1912; p. 1101; 400 w; 20c.

Jüngst, Dr.—*Der Mindestlohn im britischen Steinkohlenbergbau;* [History of the minimum-wage problem in British coal mining, and text of the British law of March29,1912 (in German)].—Glückauf, May11,1912; p. 759-764; 50c.

Also discussed (in German) in Zentral Verbd. Bergbau Betriebsl. Oestr., Zts., June 1, p. 317; 5000 w; 45c.

Kershaw, J. B. C.—*Labor Unrest in the United Kingdom.*—Engg. Mag., April,1912; pp. 1-8; 35c.

Köbrich, —. *Die Eichung der Fördergefässe im Bergwerksbetriebe;* [The German law of April 1 controlling the measurement of weights in mine cars, cages, buckets, etc., as affecting wages].—Glückauf, May27,1912; p. 667-677; 50c.

Koon, S. G.—*Hours and Intensity of Steel Works Labor.*—Iron Age, Feb.1,1912; p. 312; 1200 w; 30c.

Leucke, —. *Ueber einige Bestimmungsgründe der Lohnverdienste;* [Studies on the

bases of computing the earning power and wages of labor].—Archiv. f. exakte Wirtschaftsforschung (Jena); 1912; pp. 576-664; $2.

Lewis, T. L.—*Strikes; Their Origin and Why They Occur.*—Coal & Coke Op., May9, 1912; p. 293; May23, p. 321; 3500 w; 35c. w; 35c. Reprint in Soc. Amicale Ecole Douai; Bull.; May10, p. 271; 35c.

Lewis, T. L.—*Perplexing Problems Confronting the Coal Mining Industry.*—Coal & Coke Op., Feb.1,1912, p. 65; 2100 w; 25c.

Loring, E. A.—*Contract System;* [Reviews successful use in Western Australia]. —Mng. Mag., Jan.,1912, p. 49; 800 w; 45c.

Melsbach, E.—*Vertragsbrüchige Streiks und Aussperrungen;* [Strikes and lockouts in violation of agreement in German mines]. —Wiesbaden, 1912; 80 pp; $1 (book).

Meesmann, —. *Die Entwickelung der deutschen Eisen- und Stahl-Berufsgenossenschaften in 25 Jahren;* [Development of the German iron and steel labor unions in 25 years].—Stahl & Eisen, Jan.4,1912, pp. 1-5; 75c.

Nelson, J.—*A Sliding Scale Premium System;* [Whitcomb-Blaisdell Machine Tool Co., Worcester, Mass.].—Iron Age, March14, 1912; p. 645; 3000 w*; 30c.

du Poizat, C.—*La loi de huit heures dans les mines;* [The new 8-hour law for all underground employes in French mines].—Echo d. Mines, Apr.8,1912; p. 418; 1000 w; 35c. Reprint in Soc. Amicale Ecole Douai, Bull., Apr.10, p. 208; 35c.

Purdue, A. H., and J. E. Finney.—*The Operation of the Mine-Run Law in Arkansas;* [Paying miners for slack and "mine run" coal].—Amer. Mng. Congr., 1911; Proc., Vol. XIV, pp. 227-240.

Richardson, T., and J. G. Walbank.—*Profits and Wages in the British Coal Trade,* 1898 to 1910.—Newcastle on Tyne, 1911, pp. —; (pamphlet) ;75c.
Review in Coll'y Guardn., Jan.12,1912, p. 85; 2000 w; 30c.

Saliers, F. A.—*The Coal Miner;* [Studies on wage regulation in Hocking Valley].—Bethlehem, Penn., 1912; pp. —; (pamphlet).

Saunders, W. L.—*American and Foreign Wages and Efficiency.*—Compr. Air Mag., April,1912; p. 6381; 2500 w; 25c.

Seidl, —. *Kohlenpreise und Förderkosten;* [Coal prices and costs of production]. —Technik & Wirtschaft, Jan.,1912, pp. 47-58; 75c.

Smith, G. H.—*Single Shift on the Rand;* [Discusses advantages and requisite modifications in practice].—Mng. Mag., Jan., 1912, p. 55; 1000 w; 45c.

Verney, M.—*Co-Partnery at French Coal Mines;* [Instances of voluntary participation in profits].—Coll'y Guardn., March8, 1912; p. 484; 800 w; 30c.

Warriner, S. D.—*The Anthracite Board of Conciliation.*—Amer. Inst. Mng. Engrs., Bull. 56; Aug.,1911; p. 617; 4000 w; $1.15. Reprint in Coal & Coke Op., March14, p. 161; 25c.

Wiessner, Dr.—*Der Staatsbergbau und die Prämienlohnsysteme;* [The state mining system in Prussia and wage premiums].—Berg- & Hüttenm. Rundschau, March20, 1912; p. 127; 3000 w; 35c.

Board of Trade, Labor Dept.—*Seventeenth Annual Report on Trade Unions in the U. K.;* [Abstract].—Iron & Coal Trades Rev., March22,1912; p. 460; 2000 w; tables; 30c.

Asso. Mineraria Sarda.—*Considerazioni e proposte sui disegno di legge sul lavoro nelle miniere;* [Suggestions on a proposed mine-labor code for Italy].—Rassegna Mineraria, March1,1912; p. 125; 4000 w; 35c.

———. *Bergarbeiterlöhne;* [Wages statistics in the coal, metal and non-metal mining districts of Prussia, 3d quarter, 1911].—Zts. f. d. Berg-, H-, & Salinenwesen, Vol. 59, No. 5; 1911; p. 198-200; tables; $1.15.

———. *Central Pennsylvania Wage Agreement.*—Coal Trade Bull., May1,1912; p. 23; p. 54; 2500 w; 25c.

———. *Coal Mines (Minimum Wage) Bill;* [Text of British act].—Iron & Coal Trades Rev., March22,1912; p. 447; 2000 w; 30c. Also in Coll'y Guardn., March22, 1912; p. 581; 2000 w; 30c. Also in Coal Trade Bull., May15, p. 35; 2000 w; 25c.
Spanish abstract in Rev. Minera, Apr.1, p. 154; 1400 w; 35c.
German translation of the bill; in Glückauf, May11, p. 762-764; 50c.

———. *Compulsory Arbitration in Trade Disputes;* [With special reference to New South Wales coal strikes].—El. Rev. (London), March15,1912; p. 409; 2000 w; 35c.

———. *Contract Work in Mines;* [Problem in Western Australia].—W. A. Mng., etc., Jnl., Feb.3,1912; p. 10; 1000 w; 45c.

———. *Der Bergarbeiterstreik;* [The German coal miners' strike, 1912].—Bergbau, Apr.11,1912; p. 207; Apr.18, p. 219; 3600 w; 50c.

———. *Deutsche Bergarbeiterstreiks in frühcren Jahrhunderten;* [German miners' strikes in the 16th-18th centuries].—Stein- & Braunkohle, May,1912; p. 107; 1000 w; 35c.

———. *Die Arbeitslöhne, die Kohlenpreise und der Reingewinn der Bergwerke im Oberbergamtsbezirk Dortmund;* [Statistics of wages, coal prices and net profit in the Dortmund district, Germany].—Bergbau, March14,1912; p. 149; 1000 w; table; 35c.

———. *Die Bergarbeiterlohne in Deutschland in Jahre,* 1911; [Statistics of wages of mine employes in Germany in 1911].—Glückauf, Apr.27,1912; p. 677-685; tables; 50c. Also in Zts. f. d. Berg-, H-, & Salinenwesen, Vol 60, No. 1, 1912; pp. 48-52; $1.

———. *Die Unzufriedenheit der Ruhrbergleute;* [Labor unrest and dissatisfaction among the coal miners of the Ruhr district].—Technische Grubenbeamte, Feb. 22,1912, p. 33; 5500 w; 35c.

———. *[Discussion of British Coal Strike].*—Coll'y Guardn., Feb.23,1912; p. 388; March1, pp. 439-431; March8, p. 492; 15,000 w; 50c. Iron & Coal Trades Rev., March1, p. 343; March8, p. 383; 3000 w; 50c. Also in London Mng. Jnl., March2, p. 203; 1800 w; 35c. Also in Coal Age, March 9, p. 715; March23, p. 772; p. 774; 5000 w; 30c. Also in Electr. Rev. (London), March 8, p. 369; 2000 w; 35c.

———. *8-Hour Blast-Furnace Day with 7 Days to the Week;* [New plan of Cambria Steel Co.].—Iron Age, Apr.25,1912; p. 1045; 1800 w; 30c.

———. *Eight-Hour Shift in Lake Superior Iron Mines.*—E. & M. J., March23,1912; p. 586; 600 w; 25c.

———. *Eine Statistik über die Löhne in der Rheinisch-westfälischen Grosseisenindustrie;* [Statistics of wages in the Rhenish iron and steel industry].—Bergbau, Dec.29, 1911, p. 824; 1000 w; table; 35c.

———. *Employment, Wages and Disputes in* 1911; [in Gt. Britain; from "Labour Gazette"].—Iron & Coal Trades Rev., Jan. 19, 1912, p. 87; 1000 w; 30c.

———. *La loi de huit heures aux mines de Bruay;* [The 8-hour law at the Bruay collieries, France].—Rev. Noire, Apr.28, 1912; p. 196; 600 w; 35c.

———. *Ley fijando la jornado máxima de trabajo en las minas;* [Royal Spanish decree fixing the maximum working day in mines].—Rev. Minera, March8,1912; p. 118; 4500 w; 35c. Also in Rev. Minera (Linares), March20, p. 1008; Apr.5, p. —; 4500 w; 50c.

———. *Lohnstatistik der Rheinisch-westfälischen Eisenindustrie;* [Wages in the iron and steel works of the Rhine-Westphalia region].—Stahl & Eisen, Jan.18,1912, p. 117; 750 w; tables; 75c.

———. *Miners' Annual Conference;* [Victoria and Tasmania; rejection of award of Miners' Wages Board].—Australian Mng. Standd., March7,1912; p. 216; 1500 w; 35c.

———. *News of the Coal Strike Situation;* [In U. S., Gt. Britain and Germany].—Coal Age, March16,1912; p. 738; 1500 w; 20c.

———. *Proceedings of the Cleveland Wage Conference;* [March20,1912].—Coal Trade Bull., Apr.15,1912; p. 27-45; 25c.

———. *Proyecto de ley de enganche minero;* [Proposed legislation governing miners' employment agencies in Peru].—Soc. d. Ingrs. (Peru), Bol; Feb.,1912; p. 91-101; 75c.

———. *Scale of Wages in Connellsville Coke Region,* 1894-1912; [From Connellsville "Courier"].—Iron Age, Jan.25,1912; p. 259; 200 w; tables; 30c.

———. *Streik im Ruhrkohlenrevier;* [The German coal strike in the Ruhr district, March, 1912].—Deu. Bergwerks Ztg., March5-March20; pp. 1, 2; 50,000 w; $2.

———. *Strike and Lockout Legislation;* [Summaries in world's leading nations; from report of London Board of Trade].—Engnrg., March8,1912; p. 323; 2800 w; 30c. Also in Iron & Coal Trades Rev., March8, p. 376; 1500 w; 30c.

———. *Streiks und Aussperrungen in Deutschland im Jahre,* 1911; [Statistics of strikes and lockouts in Germany, 1911].—Glückauf, May4,1912; p. 722; 300 w; 50c.

———. *Sunday Milling on the Rand.*—S. Afr. Mng. Jnl., Dec.9,1911, p. 477; 1100 w; 35c.

———. *The Chairman's Awards;* [Discusses awards in S. Wales, Northumberland and N. Staffordshire under Minimum Wage Act].—Coll'y Guardn., May17,1912; p. 995; 3500 w; 35c.

———. *The Chinaman as a Miner;* [His methods of tin mining in Siam and Malay; from Malayan Tin & Rubber Jnl].—Mng. Jnl., Apr.20,1912; p. 401; 800 w; 35c.

———. *The 8-hours Day Question;* [On the Rand].—S. Afr. Mng. Jnl., Feb.17,1912; p. 855; 750 w; 35c.

———. *The Minimum Wage Bill;* [Editorial and Parliamentary discussion].—Iron & Coal Trades Rev., March22,1912; p. 472; p. 465; 8000 w*; 30c. Also in Coll'y Guardn., March22, p. 586; p. 593; March 29, p. 633, p. 645; 30,000 w; 50c. Also in Engnrg., March22, p. 387; March29, p. 423; 6000 w; 50c. Also in El. Rev. (London), March22, p. 449; 1500 w; 35c. Also in Mng. Jnl.

———. *The Minimum Wage;* [Reviews trend of union-labor conditions in America].—Coal Age, Feb.10,1912; p. 581; 1400 w; 20c.

———. *The Wages of Coal Miners in Germany.*—Iron & Coal Trades Rev., March 15,1912; p. 405;.500 w; 30c.

———. *Victorian Miners' Wages;* [Discusses award of state Wages Board on minimum wage question]. — Australian Mng. Standd., Feb.1,1912; p. 89; p. 99; 3000 w; 35c.

———. *Ueber die Arbeiterverhältnisse auf den preussischen Staatsmontanwerken;* [Wages and working conditions in the Prussian state mines].—Glückauf, March16, 1912; p. 438-440; 50c. Also in Berg- & Hüttenm. Rundschau, March20, p. 127; 3000 w; 35c.

WORKMEN'S COMPENSATION; INSURANCE; PENSIONING

Bartlett, C. O.—*Workmen's Liability Insurance.*—Amer. Mng. Congr., 1911; Proc., Vol. 14, p. 191; 2000 w.

Abstract in Black Diamond, Oct.28,1911, p. 42; 2000 w; 30c. Also in Mining & Engg. World, Nov.4, p. 896; 200 w; 10c. Also in M. & S. P., Nov.4, p. 582; 1600 w; 20c. Also in Mines & Minerals, Feb., 1912, p. 412; 1800 w; 35c.

Bertrams, Ferd.—*Die Grubenbeamtenversicherung im Ruhrkohlenbergbau und das Versicherungsgesetz für Angestellte;* [The German workmen's insurance law of Dec. 20, 1911; its bearing on the insurance of mine inspectors and officials in the Ruhr coal field].—Glückauf, March2,1912; p. 358-363; March9, pp. 399-404; 75c.

Düttmann, R. A.—*Reichsversicherungsordnung und Einführungsgesetz;* [German imperial insurance law and regulations, with introductory and index].—Altenburg, 1911; pp. —; $1; (pamphlet).

Düttmann, R. A.—*Führer durch die deutsche Arbeiterversicherung nach der Reichsversicherungsordnung;* [Popular guide to the German workmen's insurance system, based on the imperial insurance law]. —Altenburg, 1911; pp. —; 75c; (pamphlet).

Eschenbruch, —. *Die Versicherungspflicht der Unternehmerarbeiter auf Bergwerken;* [The German workmen's insurance law and the contract laborer].—Glückauf, March16,1912; pp. 427-438; 50c.

Foss, Eug. N.—*Workingmen's Compensation; The New Massachusetts Law and the Need of Uniform Legislation.*—Banker & Investor Mag., Jan.,1912; p. 587; 6000 w; 35c.

Jones, J. H.—*Workmen's Compensation.* —Amer. Mng. Congr., Proc., Vol. 14, 1911, pp. 180-190.

Martin, F. J.—*Employers' Liability and Accident Insurance;* [With special reference to Roseberry Liability Act in California].—M. & S. P., March9,1912; p. 380; 750 w; 20c.

McDonald, P. B.—*Compensation to Injured Workmen in Michigan.*—E. & M. J., March2,1912, p. 463; 600 w; 25c.

Pillsbury, A. J.—*The Mine Owners' Liability for Accidents;* [Roseberry law in California.—M. & S. P., Apr.6,1912; p. 507; Apr.13, p. 542; Apr.20, p. 572; Apr.27, p. 602; May4, p. 633; May11, p. 668; 8000 w; 60c.

Schwedtman, F. C.—*German Workingmen's Accident Insurance.*—Amer. Industries, April,1912; p. 20; 1000 w; 35c.

Simmons, J.—*Homestake Employes' Aid Fund.*—Mines & Minerals, Apr.,1912; p. 555; 600 w; 35c.

Wiessner, Dr.—*Die Knappschaftsvereine und die Reichsversicherungsordnung vom 19 Juli,* 1911; [The German imperial workmen's insurance act of July 19, 1911, and its bearing on the insurance funds of trade

unions].—Berg- u. Hüttenm. Rundschau, Dec.5,1911, p. 43; 1800 w; 35c.

Also discussed by Dr. Arndt in Kali, Dec. 1, p. 525-528; 45c.

N. S. Wales Dept. of Mines.—*Miners' Accident Relief Fund; Annual Statement of Audited Accounts for* 1911; [Abstract of official report on accidents and compensation].—Australian Mng. Standd., March7, 1912; p. 217; 1200 w; 35c.

Miners' Phthisis Commission (Transvaal).—*Report and Recommendations;* [Abstract and discussion].—S. Afr. Mng. Jnl., March30,1912; p. 153; p. 135; April6, p. 210; 5000 w; 50c.

Royal Commission, W. Australia.—*Miners' Lung Diseases;* [Report of Commission].—W. A. Mng., etc., Jnl., Dec.9,1911, p. 4; 2800 w; 50c. Abstract in S. Afr. Mng. Jnl., Apr.6,1912; p. 197; 2000 w; 35c.

———. *Das Versicherungsgesetz für angestellte, knappschaftliche Versicherung und private Lebensversicherungsverträge der Grubenbeamten;* [The German imperial insurance law, trade-union insurance and private life-insurance; their relations to the German miner].—Bergbau, May2,1912; p. 249; 2000 w; 35c.

———. *Die Invalidenversicherung der Betriebsbeamten, Werkmeister u. s. w. nach der Reichs-Versicherungsordnung;* [Invalid insurance for officials, superintendents, etc., according to the German imperial insurance law].—Bergbau, Dec.29,1911, p. 823; 1200 w; 35c.

———. *Workmen's Compensation Acts Passed by Various State Legislatures at Sessions of* 1911; [Cal., Ill., Kans., Mass., Nev., N. Hamp., N. J., Ohio, Wash., Wis.].—Amer. Industries, May,1912; pp. 24-25; 35c.

———. *Workmen's Compensation in Gt. Britain.*—M. & S. P., Apr.6,1912; p. 496; 1000 w; 20c.

———. *Workmen's Compensation Act;* [Preliminary draft of Penn'a. commission's report].—Coal Trade Bull., June1,1912; p. 27; June15, p. 25; 6000 w; 40c.

———. *Workmen's Compensation and Employers' Liability—Text of the Green Liability Law of Ohio.*—Coal Trade Bull., Feb.15,1912; p. 27-32; 44-46; 12,000 w; 25c.

CHAPTER X.—THE MILL AND MILLING.

(Including Cyaniding and Amalgamation.)

Reduction: Crushing, Grinding, etc.

STAMP MILLING

Del Mar, Alg.—*A Treatise on Practical Stamp Milling and Stamp Mill Construction.*—New York; 1911; 134 pp; 98 figs; $2 (book).

Del Mar, A.—*Stamp Battery Cam Shafts.*—M. & S. P., Jan.13,1912; p. 113; Jan.27, p. 176; 1200 w*; 30c.

Fuller, J. P.—*Reinforced Concrete for Stamp Foundations.*—Mng. Mag., Apr.,1912; p. 278; 1000 w*; 45c.

Huntoon, L. D.—*Stamp Milling in* 1911.—E. & M. J., Jan.6,1911, p. 52; 2200 w; 25c.

Hutchinson, J. W.—*Operating Costs at the Goldfield Consol. Mill, Nev.*—M. & S. P., Jan.20,1912, p. 137-140; 1000 w; charts; 20c.

Martin, A. H.—*Heavy Stamps Find Favor at Nevada Mills.*—Mining & Engg. World, March30,1912; p. 703; 1800 w*; 10c.

MacNichol, A. W.—*Clamps for Stamp Milling.*—M. & S. P., March16,1912; p. 412; 200 w*; 20c.

Nissen, P.—*Notes on High-Duty Gravity Stamp Mills;* [Tests of heavy Nissen stamps vs. intermediate-weight stamps at City Deep mill, Witwatersrand].—Cheml. Met. & Mng. Soc. of S. Afr., Jnl., Oct., 1911, pp. 111-124*; (Discussion), Oct., p. 124-126; Nov., p. 182-187*; Dec., p. 225-; Jan.,1912, p. 275-279. Reply to discussion March, p. 357-365*; 75c.

Abstract in Afr. World, Nov.4, p. 587; Nov.18, p. 76; 2000 w; 50c. Also in S. Afr. Mng. Jnl., Nov.4, p. 307; Dec.23, p. 572; 4200 w; 50c. Also in E. & M. J., Dec.23, p. 1219; 1000 w; 25c. Also in Mng. & Engg. World, Dec.30, p. 1316; 1200 w; 10c.

Smart, G. O.—*Stamp-Milling.*—See Caldecott's "Rand Metallurgic Practice," under Transvaal.

Stadler, H.—*High-Duty Gravity Stamps;* [Discussion of Nissen's paper].—S. Afr. Mng. Jnl., Dec.2,1911, p. 457; 2000 w; 35c. Also in M. & S. P., Feb.17,1912, p. 274; 2000 w; 20c. Also in E. & M. J., Feb.17, p. 354; 1200 w; 25c.

Thomas, J. E.—*Sorting and Breaking.*—See Caldecott's "Rand Metallurgic Practice," under Transvaal.

———. *A Chilled-Iron Stamp Shoe.*—E. & M. J., March30,1912; p. 640; 600 w*; 25c.

———. *Changes in the Design of Rand Stamps.*—E. & M. J., May25,1912; p. 1032; 300 w; 25c.

———. *Cannon for Shooting Out Keys;* [of driving pulley to stamp cam-shaft].—E. & M. J., Apr.27,1912; p. 834; 300 w*; 25c.

———. *Reduction Plants in the State of Nevada;* [Directory of mills with crushing equipment].—Mining & Engg. World, Feb. 17,1912; p. 408; 500 w; tables; 10c. Also in Salt Lake Mng. Rev., Jan.15, p. 27; 1000 w; table; 25c.

———. *The Cons. Langlaagte New Plant;* [Crusher station; open-front mortar boxes].—S. Afr. Mng. Jnl., Apr.27,1912: p. 305; 400 w*; 35c.

———. *The Crown Mines' Crusher Stations.*—S. Afr. Mng. Jnl., Apr.13,1912; p. 233; 750 w*; 35c.

BALL AND TUBE MILLS; FINE GRINDING

Allen, A. W.—*Pebble Efficiency in Tube Milling.*—M. & S. P., Jan.6,1912, p. 19; 1000 w; 35c.

Ball, H. S.—*The Economics of Tube Milling.*—Instn. of Mng. & Met'l'gy, Bull. 83; Aug.,1911, pp. 12-58. Discussion in Bull. 86, Nov., pp. 3-14; Bull. 87, pp. 33-50; 75c.

Abstract of paper in M. & S. P., Sept. 23, p. 383; 3500 w; 20c. Also in S. Afr. Mng. Jnl., Sept.23, p. 76; Oct. 7, Oct. 14, p. 186; Oct.21, p. 229; Oct.28, p. 259; 10,000 w; 95c. Also in Mng. Sci., Oct.5' p. 313; 650 w; 20c. Also in S. Afr. Engg., Oct., p. 64, 68; 2500 w*; 35c.

von Bernewitz, M. W.—*Ball-Mill Practice;* [Notes on various phases].—Mng. Mag., Jan.,1912, p. 59; 300 w; 45c.

Brown, F. C.—*Tube Mill Practice and Liners.*—M. & S. P., Feb.3,1912; p. 206; 1800 w*; 20c. Abstract in Mining & Engg. World, March23, p. 665; 1200 w*; 10c.

Dowling, W. R.—*Table of Pebble Loads of Different Depths in a Tube Mill 22 ft. in Length and 5 ft. in Internal Diameter.*—Cheml. Met. & Mng. Soc. of S. Afr., Jnl.; Jan.,1912; p. 287; 200 w; table; 90c.

Dowling, W. R.—*Tube Milling.*—See Caldecott's "Rand Metallurgic Practice," under Transvaal.

Abstract in S. Afr. Mng. Jnl., May11, 1912; p. 385; 1500 w; 35c.

Empson, J. B.—*The Slow-Speed Chilean Mill as Applied to Mexican Practice.*—Mex. Insti. of Mng. & Met'l'gy. Trans.; Vol. 2, No. 6, 1911, pp. 172-204*; $1. (Duplicated in both Spanish and English.)

Abstract in E. & M. J., Feb.3,1912; p. 259; 4800 w; 25c. Also in Met. & Cheml. Engg., April, p. 244; 1800 w; 35c. Also in Engg. Mag., April, p. 109; 1000 w; 35c. Also in Mng. & Engg. World, March23, p. 649; 3600 w*; 10c.

Spanish abstract in Mex. Mng. Jnl., June, p. 59; 2000 w; 25c.

Hanson, H.—*Development of Fine Grinding in Connection with Gold Ore Treatment;* [Read to Canadn. Mng. Inst., Porcupine branch].—Canadian Mng. Jnl., March 1,1912; p. 166; 1200 w; 25c. Also in Mex. Mng. Jnl., April, p. 18; 1200 w; 25c.

Lamb, M. R.—*Crushing Machines for Cyanide Plants;* [Read to Amer. Inst. Mng. Engrs.; abstract].—Qeensland Govt. Mng. Jnl., May,1912; p. 211; 800 w; 35c. Also in S. Afr. Mng. Jnl., June22, p. 621; 2000 w; 35c.

McDermott, J.—*The Lane Mill; Report on Operations at Cue, W. Australia.*—W. A. Mng., etc., Jnl., Jan.13,1912; p. 12; 2500 w; 50c. Reprint in Los Angeles Mng. Rev., March23, p. 7; 20c. Also in Salt Lake Mng. Rev., March30, p. 19; 25c.

MacFarren, H. W.—*Textbook of Cyanide Practice;* [Includes notes on tube milling and fine grinding, with bibliographies].—New York, 1912; pp. 291*; $3 (book).

Meade, R. K.—*Portland Cement; Its Composition, Raw Materials, Manufacture, Testing and Analysis.*—Easton, Penn.; 1911 (2d edition); 512 pp*; $4.50 (book).

Payne, C. Q.—*Progress in Roll Crushing;* [Read to Amer. Inst. Mng. Engrs., Oct., 1911].—Abstract in E. & M. J., Feb.17, 1912; p. 370; 2200 w; 25c. Also in Met. & Cheml. Engg., March, p. 170; 1500 w*; 35c. Also in Mines & Methods, March, p.

425; 7000 w*; 20c. Also in Mex. Mng. Jnl., May, p. 34; 4000 w; 25c. Amer. Inst. Mng. Engrs., Bull. 67, July,1912; pp. 763-766; $1.15.

Schmitt, C. O.—*Future Economies in Rand Reduction Plants.*—Cheml. Met. & Mng. Soc. of S. Afr., Jnl., April,1911, p. 464; 6000 w*; 90c. Also in Instn. of Mng. & Met'l'gy, Bull. 80, May,1911; 59 pp*; 50c. Abstracts in S. Afr. Mng. Jnl., May27,1911, p. 547; July1, p. 739; 3200 w; 50c.

Discussion and Reply.—C. M. & M. Soc., Jnl., May,1911, p. 563; 5500 w; July, p. 16; 10,000 w; $1.40. Also in I. of M. & M., Bull. 81, June,1911, p. 3; 13,000 w*; 50c; Bull. 88, Jan.,1912, pp. 23-37; 50c.

Stadler, H.—*The New Metallurgy;* [Discusses fine grinding and extraction and working costs; alleges excessive refinement in practice].—Mines & Minerals, July, 1912; p. 739; 3600 w; tables: 30c. Also in M. & S. P., July20, p. 78; 4000 w*; 20c.

Sturtevant, L. H.—*Phosphate Grinding;* [Sturtevant ring-rolls].—Amer. Fertilizer, 1800 w*; 35c. Also in Rock Products, June, p. 39; 2000 w; 30c. Also in Cement, May, p. 351; 2000 w*; 30c.

Sturtevant, L. H.—*Cement Grinding.*—Met. & Cheml. Engg., June.1912; p. 380; May18,1912; p. 46; 1200 w*; 25c. Also in Phosphate, June24,1912; p. 521; 750 w*; 35c.

Truscott, S. J.—*The Economics of Tube Milling;* [Abstract of discussion of Ball's paper; read to Instn. of Mng. & Met'l'gy].—M. & S. P., Apr.13,1912; p. 533; 2500 w*; 20c.

Van Zandt, P. C.—*Problems Involved in the Selection of Machinery for the Manufacture of Portland Cement;* [Crushing and grinding equipment; rotary kilns].—Engg. News, Dec.14,1911, p. 700; 6000 w*; 25c.

Webster, E. H.—*The Slow-Speed Chilean Mill.*—E. & M. J., Feb.24,1912; p. 393; 2000 w; 25c.

Ch. P.—*Les appareils modernes pour le broyages des phosphates;* [Modern grinding equipment for phosphates]. — Phosphate, March11,1912; p. 217; 1000 w*; 35c.

———. *Amalgamation Tables for Huntington Mills.*—E. & M. J., June1,1912; p. 1078; 1000 w*; 25c.

———. *Die Gigantmühle;* [Bradley giant mills in cement industry in America and Europe].—Ton-Industrie Ztg., Feb.3, 1912; p. 186; 400 w; 30c.

———. *El molino tubular;* [The tube mill in gold metallurgy].—Mex. Mng. Jnl., March,1912; p. 57; 3200 w; 25c.

———. *Grinding Analyses and Their Application;* [Relation between energy units and mesh aperture].—E. & M. J., Apr.6, 1912; p. 681; 1000 w; 25c.

MISCELLANEOUS CRUSHING AND GRINDING

Browne, R. S.—*Progress in Cyano-Metallurgy in* 1911; [I: Crushing and grinding; II: Agitation, precipitation, filtration].—Mining & Engg. World, Feb.3,1912; p. 287; Feb.10, p. 348; 8000 w; 20c.

Bruce, Jas. L.—*Ore Dressing in the Joplin District.*—E. & M. J., Feb.24,1912; p. 405; March2, p. 495; March9, p. 501; March16, p. 553; 15,000 w*; 75c.

Canda, F. M.—*The Canda Crusher Plate;* [Special bar design for "Adamantine" steel jaw plates].—E. & M. J., May18,1912; p. 998; 250 w*; 25c.

Cole, E. L.—*The New Buck Mountain Breaker;* [of Lehigh Valley Coal Co., Mahanoy City, Pa.].—Coal Age, May18,1912; p. 1032; May25, p. 1067; 500 w*; 30c. Also described in Mines & Minerals, June, p. 637; 3600 w*; 35c.

Guillet, L.—*La fabrication du papier et de la poudre d'aluminium;* [The manufacture of aluminum paper and the crushing process of manufacture of aluminum powder].—Rev. de Métallurgie, March,1912; pp. 147-159*; $1.15.

Hore, R. E.—*The Copper Mining Industry of Michigan;* [Crushing and concentrating; smelting and refining].—Mining & Engg. World, Apr.6,1912; p. 763; 5500 w*; 10c.

Lang, H.—*Metallurgy;* [Vol. I, includes chapter on ore crushing].—N. Y. and London; 1911; 255 pp; $3.00 (book).

Poole, W.—*The Treatment of Broken Hill Ores;* [I: Grinding and Concentration; read to Sydney Univ. Engg. Soc.].—Mines & Minerals, Nov.,1911, p. 227; 7000 w*; 35c.

Rice, C. T.—*Feeding Boulders to Crushers;* [at Calumet & Hecla mines].—E. & M. J., Jan.20,1912, p. 159; 1200 w*; 25c.

Rollandet, G. J.—*Edison's Method of Separating Fine Materials;* [Edison U. S. patent on system of crushing, grinding, conveying and blowing for low-grade ores].—Mng. Sci., June13,1912; p. 506; 2000 w*; 25c.

Shepard, F. E.—*Progress in Mill Design;* [Lecture to Colorado mining men, Telluride, Feb. 23, 1912].—E. & M. J., March16,1912; p. 543; 6000 w; 25c. Also in Met. & Cheml. Engg., April,1912; p. 215; 6000 w; 35c. Also in Queensl. Govt. Mng. Jnl., May, 1912; p. 220; 6000 w; 35c.

Sully, J. M.—*Milling the Ore of the Chino Mine.*—M. & S. P., March30,1912; p. 464; 3000 w*; 20c.

Traylor, S. W.—*Heavy Duty Crushing Rolls; Automatic Lateral Adjustment.*—Met. & Cheml. Engg., June,1912; p. 378; 1600 w*; 35c.

Traylor, S. W.—*The Largest Single-Unit Crushing Plant;* [Blake jaw-crushers and rolls to prepare concrete at Kensico dam, N. Y.].—Mng. & Engg. World, Feb.24,1912; p. 451; 3000 w*; 10c. Also in Engg. News, Feb.22, p. 355; 2600 w*; 25c. Also in M. & S. P., Feb.24, p. 310; 2500 w*; 20c. Also in Engg. Record, Feb.24, p. 216; 1800 w*; 25c. Also in E. & M. J., March2, p. 450; 1800 w*; 25c.

Walker, M. A.—*Taylor Breaker near Scranton, Penn.*—Coal Age, Dec.23,1911, p. 334; 1200 w*; 20c.

Wolf, A.—*Gequetschter Sand, ein vorzügliches Rohmaterial zur Zementwaren-Fabrikation;* [Roll-crushed sand, an admirable material for the manufacture of cement and sandlime products].—Montan Ztg., May1,1912; p. 162; 750 w*; 35c.

Woodbridge, D. E.—*Mining and Concentrating the Sydvaranger Iron Ores.*—Engg. Mag., April,1912; pp. 9-21*; 35c.

Worcester, S. A.—*A Grizzly Crusher Feeder.*—E. & M. J., May4,1912; p. 883; 600 w*; 25c.

———. *Cost of Crushing Rock at the Pacoima Quarry of the Los Angeles Highway Commission;* [From the commission's report for 2d semester, 1911].—Engg. & Contractg., May1,1912; p. 494; 750 w; 20c.

———. *Crushing Coal for Boiler Use.*—Mines & Minerals, Jan.,1912; p. 349; 750 w*; 35c.

———. *Ein Backensteinbrecher von grosser Leistungsfähigkeit;* [Description of monster jaw stone-crusher of Friedrich & Co., Leipzig].—Dingler's Polytechn. Jnl., Feb.3,1912, pp. 74-77*; 50c.

———. *New York State Highways;* [Includes notes on use of gravel and stone and crushing equipment].—Municipal Jnl., May16,1912; p. 739-750*; 25c.

———. *The Large Crusher at the Biwabik Mine;* [Crushes 1000 tons of taconite ore hourly].—Iron Trade Rev., Feb.15,1912; p. 387; 1600 w*; 20c.

———. *The Samson Crusher.*—Mng. Sci., Apr.18,1912; p. 355; 1000 w; 20c.

———. *Types of Shaft Bearings for Gyratory Crushers.*—Engg. & Contractg., May29,1912; p. 598; 1500 w*; 25c.

Concentration: Sorting, Sizing, Washing

Allen, A. W.—*Concentration and Cyanidation.*—Mng. Mag., Feb.,1912; p. 117; 1200 w; 45c.

Bement, A.—*The Screening Problem in Illinois.*—Coal Age, June1,1912; p. 1105; 1000 w*; 20c.

Boss, M. P.—*The Future of Concentration.*—M. & S. P., Jan.6,1912. p. 19; 1100 w; 35c. Also in Mines & Methods, Jan., 1912, p. 383; 1100 w; 35c.

Bruce, J. L.—*Ore Dressing in the Joplin District.*—E. & M. J., Feb.24,1912; p. 405; March2, p. 459; March9, p. 501; March16, p. 553; 15,000 w*; 75c.

Bryant, F. C.—*Process for Separating Blende from Barite;* [in central Missouri].—E. & M. J., May11,1912; p. 929; 750 w; 25c.

Buskett, E. W.—*Canvas-Table Tests for Recovering Lead Slimes;* [In Joplin district, Mo.].—Mining & Engg. World, Feb.24,1912; p. 456; 1000 w; 10c.

Caetani, G.—*Re-Treatment of Table Middlings.*—M. &. S. P., Apr.6,1912; p. 495; 1500 w*; 20c.

Clerc, F. L.—*Igneous Concentration of Zinc Ore.*—E. & M. J., Jan.13,1912, p. 127; 6000 w; 25c.

Cole, E. L.—*The New Buck Mountain Breaker;* [of Lehigh Valley Coal Co.; Mahanoy City, Pa.].—Coal Age, May18,1912; p. 1032; May25, p. 1067; 5000 w*; 30c. Also described in Mines & Minerals, June, p. 637; 3600 w*; 35c.

Cox, J. R., and others.—*Comparative Efficiencies of Certain Methods of Screening and Classifying Fine Material, and a Comparison of Screened with Classified Feed on the Wilfley Table.*—Canadian Mng. Inst., Jnl., No. 16. Oct., 1911. pp. 79-150*; $1.20. Abstract in Mines & Minerals, June,1912; p. 685; 3500 w*; 35c.

Del Mar, Alg.—*Needles for Measuring Screens.*—E. & M. J., Dec.23,1911, p. 1217; 300 w*; 25c.

Denny, G. A.—*Concentration vs. Cyanidation.*—Mng. Mag., April,1912; p. 293; 2700 w; 45c.

Eddy, L. H.—*Cross System Gold Saving Tables;* [on Oroville dredges, California].—E. & M. J., Feb.24,1912; p. 396; 1000 w*; 25c.

Fischer, Siegfr.—*The Concentration of Carnotite Ores, and Some Similar Ores.*—Met. & Chem. Engg., June,1912; p. 356; 2700 w*; 35c.

Golding, C. E.—*Miami Concentrating Mill.*—Mines & Minerals, Apr.,1912; p. 545; 2200 w*; 35c.

Hamilton, E. M.—*Cyaniding of Concentrate;* [Data from Mexican mills treating gold-silver ores].—E. & M. J., Apr.27,1912; p. 839; 5000 w; 25c.

Hore, R. E.—*The Copper Mining Industry of Michigan;* [Crushing and concentrating].—Mining & Engg. World, Apr.6,1912; p. 763; 5500 w*; 10c.

Judd, Edm. K.—*Ore-Dressing Equipment of the Columbia School of Mines.*—Mng. Sci., Apr.11,1912; p. 326; 2700 w*; 20c.

Lass, W. P.—*The Cyanide Plant at the Treadwell Mines, Alaska;* [Cyaniding concentrates].—Amer. Inst. Mng. Engrs., Trans. for Oct.,1911; 34 pp*; $1.15.
Abstract in M. & S. P., Oct.21,1911; p. 514; 6300 w*; 20c. Also in Mng. Sci., Apr. 18,1912; p. 346; Apr.25, p. 369; 5000 w*; 30c.

Loser, E.—*Fortschritte im Aufbereitungswesen für Feinerze;* [General notes on progress in the dressing of fine ores].—Erzbergbau, Feb.15,1912; p. 50; 1400 w; 35c.

Lowden, H. B.—*A New Slime Density Table.*—Met. & Chem. Engg., June,1912; p. 369; 100 w; tables; 35c.

McClave, J. M.—*The Garfield Table* [And experiences in various Utah mills].—Colo. School of Mines Mag., March,1912; p. 123; 1500 w*; 50c.

McClave, J. M.—*Milling the Tam O'Shanter Ore;* [Ashcroft, Colo., lead-zinc.—Mines & Minerals, March,1912; p. 492; 1600 w*; 35c.

Malcolmson, J. W. and L. R. Budrow.—*Preliminary Handling of Ore at El Tigre.*—M. & S. P., March16,1912; p. 398; 1000 w*; 20c.

Martin, Al. H.—*Rotary Tray Concentration;* [Darrow-Hambric tables superceding canvas tables on California gold ores].—Mines & Minerals, Feb.,1912; p. 428; 1000 w*; 35c. Abstract in Mining & Engg. World, March23, p. 668; 750 w*; 10c.

Moldenhauer, M.—*Das Filter Bei der Aufbereitung feiner sulfidischer Sande und Schlämme;* [Filters in the concentration of fine sulphide sands and slimes, especially copper].—Metallurgie, Feb.8,1912; p. 99; 2500 w*; 50c.

Pickard, H. K.—*A Graphic Method of Illustrating the Results of Extraction Tests.*—Instn. of Mng. & Met'gy, Bull. 89, Feb., 1912; p. 1-3; 750 w*; 50c.
Reprint in S. Afr. Engg., Feb.29,1912; p. 25*; 35c. Also in E. & M. J., March30, p. 639*; 25c. Also in Mng. Sci., Apr.4, p. 308*; 20c. Also in Mining & Engg. World, 6; 10c. Also in Queensland Govt. Mng. Jnl., April,1912; p. 153; 750 w*; 35c.

Poole, W.—*The Treatment of Broken Hill Ores;* [I: Grinding and Concentration; read to Sydney Univ. Engg. Soc.].—Mines & Minerals, Nov.,1911, p. 227; 7000 w*; 35c.

Reddie, R.—*A Durable Shaking Screen.*—Mines & Minerals, June,1912; p. 676; 500 w*; 35c.

Rice, C. T.—*Wilfley Table Kinks;* [Simple improvements in Joplin district, Mo.].—E. & M. J., June8,1912; p. 1129; 500 w*; 25c.

Rice, C. T.—*Joplin Jigging Practice.*—E. & M. J., May18,1912; p. 983; 1800 w; 25c.

Rice, C. T.—*Joplin Hand Jig.*—E. & M. J., June1,1912; p. 1079; 1800 w*; 25c.

Rice, C. T.—*Cast Iron Screen Frames for Jigs;* [In Joplin district, Mo.].—E. & M. J., June1,1912; p. 1060; 450 w*; 25c.

Rice, C. T.—*Stationary Dewatering Screen; and, Steel Tray and Support for Hancock Jigs;* [in Flat River lead district of southeast Missouri].—E. & M. J., June 15,1912; p. 1177; 1000 w*; 25c.

Rollandet, G. J.—*Edison's Method of Separating Fine Materials;* [Edison's U. S. patent on system of crushing, grinding, conveying and blowing for low-grade ores]. —Mng. Sci., June13,1912; p. 506; 2000 w*; 25c.

Rollandet, G. F.—*Separation of Liquids from Ore Pulp;* [Caldecott patent].—Mng. Sci., Feb.29,1912; p. 210; 750 w*; 20c.

Savoia, U.—*Miniere di zinco lombarde;* [Zinc mining, dressing and metallurgy in Lombardy and Upper Italy].—Milan, 1911; pp. —; (book).

Schmitt, C. O.—*Future Economies in Rand Reduction Plants.*—Cheml. Met. & Mng. Sci. of S. Afr., Jnl., April,1911, p. 464; 6000 w*; 90c. Also in Instn. of Mng. & Met'l'gy, Bull. 80, May,1911; 59 pp*; 50c. Abstracts in S. Afr. Mng. Jnl., May27,1911, p. 547; July1, p. 739; 3200 w; 50c.

Discussion and Reply.—C. M. & M. Soc., Jnl., May,1911, p. 563; 5500 w; July, p. 16; 10,000 w; $1.40. Also in I. of M. & M., Bull. 81, June,1911, p. 3-13; 13,000 w*; 50c; Bull. 88, Jan.,1912, pp. 23-37; 50c.

Shepard, F. E.—*Progress in Mill Design;* [Lecture to Colorado mining men, Telluride, Feb. 23, 1912].—E. & M. J., March16,1912; p. 543; 6000 w; 25c. Also in Met. & Cheml. Engg., April,1912; p. 215; 6000 w; 35c. Also in Queensl. Govt. Mng. Jnl., May, p. 220; 6000 w; 35c.

Skinner, L. B.—*A Critical Discussion of the Principles of the Richards Pulsator Classifier.*—Colo. Scient. Soc., Proc; Apr., 1912; p. 131-164*; 75c.

Extract on Henderson Inclined-Screen Shaking Hydraulic Classifier.—Met. & Cheml. Engg., June, p. 343; 2700 w*; 35c.

Sully, J. M.—*Milling the Ore of the Chino Mine.*—M. & S. P., March30,1912; p. 464; 3000 w*; 20c.

Tellam, Alfr.—*Concentration Analysis from Cananea Practice;* [Practice, flow sheet and costs at Can. Cons. Copper Co. Mill No. 2].—Mng. Mag., Apr.,1912; p. 272; 3000 w*; 45c.

Thomas, J. E.—*Sorting and Breaking.*—See Caldecott's "Rand Metallurgic Practice," under Transvaal.

Thomas, J. E.—*Treatment of Sand.*—See Caldecott's "Rand Metallurgic Practice," under Transvaal.

Tornow, Dr.—*Ueber Schüttelrutschen im Bergwerksbetriebe;* [Grizzlies, shaking tables and trough conveyors in mining practice].—Techn. Blätter, March30,1912; p. 97; Apr.5, p. 105; Apr.13, p. 113; 7000 w*; 75c.

Traphagen, F. W.—*The Low-Grade-Ore Problem;* [Read to Colo. Mng. & Metgl. Asso.].—Colo. School of Mines Quar'ly, Jan.,1912; p. 10; 1400 w; 50c. Also in Mining & Eng. World, March,30 p. 722; 1400 w; 10c.

Spanish abstract in Mex. Mng. Jnl., June, 1912; p. 55; 1400 w; 25c.

Verbouwe, —. *Installation pour l'aspiration et la récupération des poussières du triage au puits Le Fief;* [Sturtevant aspirator for recovering coal dust about screens and sorting plants; installation at Le Fief colliery, Belgium].—Annales d. Mines (Belgiq.). Vol. 17, No. 2, 1912; p. 401; 1200 w*; 95c.

Wood, H. E.—*Ore Separation by Decrepitation.*—E. & M. J., June15,1912; p. 1184; 1000 w; 25c.

S. E.—*De Metalurgia;* [Progress in Metallurgy in Europe and elsewhere; 1: zinc]. —Rev. Minera, Apr.16,1912; p. 177; Apr.24, p. —; 3500 w; 50c.

———. *Concentrating Bolivian Tin Ores;* [Flow Sheet of Llallagua mine].—Mng. Mag., March,1912; p. 208; 1000 w*; 35c.

———. *Efficiency in Concentration.*—Mng. Mag., Apr.,1912; p. 253; 1600 w; 45c.

———. *Joplin Trommels.*—E. & M. J., Apr.27,1912; p. 836; 500 w*; 25c.

———. *Improved Richards Pulsator Classifier.*—E. & M. J., May4,1912; p. 896; 600 w*; 25c.

———. *Murex Magnetic Co., Ltd.;* [report of Chairman].—Mng. Jnl., Dec.23,1911, p. 1258; 8000 w; 35c.

———. *Murex Process at Cordoba Copper Mines, South Spain.*—M. & S. P., March 30,1912; p. 466; 500 w; 20c.

———. *Nouveau tamiseur-cribleur, système Dallemagne;* [New Dallemagne screen].—Echo d. Mines, Feb.22,1912, p. 236; 1000 w; 35c.

———. *Standpipe on a Mill Pump;* [for supplying water to hydraulic classifiers, jigs and tables, Joplin district, Mo.].—E. & M. J., May4,1912; p. 883; 250 w*; 25c.

———. *Tailing Gate for Jigs;* [In Joplin district].—E. & M. J., Apr.6,1912; p. 692; 500 w*; 25c.

———. *The Butte Central Co.'s New Concentrating Plant.*—Mining & Engg. World, May25.1912; p. 1097; 1000 w; 10c.

———. *The Caldecott Diaphragm Cone Classifier and Sand Filter Table.*—S. Afr. Mng. Jnl., Jan.27,1912; p. 740; 750 w; 35c.

———. *The Slime Problem;* [for copper, lead, and zinc].—E. & M. J., Apr.27,1912; p. 821; 750 w; 25c.

———. *The Use of Electricity in the Treatment of Magnetic Ores;* [Describes Ruthenburg separator].—El. Rev. (London), Dec.29,1911, p. 1069; 1000 w; 35c.

———. *Traveling-Band Feeder for Tiple Screens.*—Coal Age, June8,1912; p. 1143; 500 w*; 20c.

WASHING

See also "Dredging; Sluicing; Hydraulicking."

Brown, S. H.—*Methods of Washing Sand and Gravel;* [Read to Iowa Asso. of Cement Users].—Iowa Engr., Feb.,1912; p. 154; 1000 w; 25c.

Delamater, G. R.—*Standardization in Coal Washing.*—Mines & Minerals, March, 1912; p. 461; 5000 w*; 35c.

Delamater, G. R.—*Standards in Coal Washings.*—Coal Age, June1,1912; p. 1115; 1300 w; 20c. Also discussed in Mines & Minerals, June,1912; p. 660; 1200 w; 35c.

Gee, Wm. J.—*A New Process for the Separation and Grading of Solids Suspended in Liquids.*—Roy. Soc. of Arts, Jnl.; Jan.26, 1912; p. 274; 5000 w*; 35c.

Abstract in Engg. Mag., April, p. 89; 1000 w*; 35c. Also in Mining & Engg. World, Apr.20, p. 867; 2000 w*; 10c.

Harris, A. H.—*Saving the Gold in Beach Sand;* [Scraper and concentrator for use in Oregon].—M. & S. P., March20,1912; p. 505; 500 w*; 20c.

Henry, R. A.—*Appareil pour le tracé de courbes caracteristiques de lavabilité des charbons;* [Apparatus for tracing the characteristic curves of the capacity of any coal for washing].—Rev. Univ. d. Mines, 1911, No. 2, pp. 68-*; 90c. Summary in Rev. de Métal'gie, Oct.,1911, pp. 804-808*.

Brief English abstract in Coal Age, Jan. 20,1912, p. 474; 800 w*; 20c.

Killik, F. A.—*Notes on a Simple Method of Separating Rock from Stiff Clays;* [at

Totok gold mines, Celebes].—Instn. of Mng. & Met'l'gy, Bull. 87, Dec.,1911, p. 1-7; 1200 w*; (Discussion), Bull. 88, Jan.,1912, p. 11-12; 500 w; 75c.

Reprinted in Mining & Engg. World, Jan. 13,1912; p. 61; 1600 w*; 10c. Also in Mng. Sci., Jan.18, p. 47; 1600 w*; 20c. Also in E. & M. J., Feb.10, p. 304; 1600 w*; 25c. Also in Mines & Methods, Feb., p. 419; 1500 w*; 25c.

German abstract in Erzbergbau, March 15, p. 82: 1000 w*; 35c.

Radford, W. H.—*Rocker for Washing Gravel.*—M. & S. P., June8,1912; p. 801; 150 w*; 20c.

Rice, S. B.—*A Gravel-Washing Plant for Preparing Railroad Ballast;* [Read to Amer. Ry. Engg. Soc.].—Engg. Record, Apr.6,1912; p. 385; 2400 w*; 25c.

Walker, Edw.—*The Gee Centrifugal Concentrator.*—M. & S. P., Apr.27,1912; p. 598; 500 w; 20c.

Woodbridge, D. E.—*Beneficiating Lake Iron Ores.*—E. & M. J., Jan.27,1912, p. 222; 1800 w; 25c.

———. *A Simple Vortex Classifier;* [Used in southwest Missouri mills].—E. & M. J., Apr.20,1912; p. 787; 500 w*; 25c.

———. *Coal Washing at Lahausage, Alabama.*—Mines & Minerals, Feb.,1912; p. 391; 750 w; 35c.

———. *Concentration of Ore Slime by Centrifugal Separation;* [Peck system at Anaconda and Cananea copper mines].—Met. & Cheml. Engg., April,1912; p. 235; 2700 w*; 35c.

———. *Consolidated Coal Washery at Saginaw, Mich.*—Mines & Minerals, March, 1912; p. 468; 1000 w*; 35c.

———. *Die moderne Aufbereitung von Kohle und Erzen;* [Recent progress in washing and dressing of coal and ores].—Riga, Industrie Ztg., Dec.31,1912; p. 371; 1600 w; 35c.

———. *Lavoir à charbon de la Compagnie de Fives-Lille;* [The coal washing plant of the Five-Lilles Co., France].—Rev. Noire, Feb.18,1912; p. 82; 600 w*; 35c.

———. *Traitement des argiles contenant des pierres et de la chaux;* [Treatment of clays containing pebbles and lime; from Brit. Clay Worker].—Rev. d. Matériaux, March,1912; p. 33B; 1000 w*; 65c.

———. *Washing Plant* [for sand and gravel, Palmyra, N. Y.].—Rock Products, Dec.,1911, p. 33; 750 w*; 35c.

FLOTATION

Durell, C. T.—*Flotation of Zinc Ores.*—M. & S. P., May25,1912; p. 717; 1000 w; 20c. Reprint in Colo. School of Mines Mag., June,1912; p. 199; 1000 w; 65c.

Gibson, A. H.—*The Behavior of Bodies Floating in a Free or a Forced Vortex.*—Manchester Lit. & Philos. Soc., Memoir No. 7, 1911; 19 pp; $2.

Gibson, A. H.—*The Manner of Motion of Water Flowing in a Curved Path.*—Manchester Lit. & Philos. Soc., Memoir No. 13, 1911; 5 pp; $2.

Holtmann, —. *Das Schwimmaufbereitungsverfahren der Grube Friedrichssegen nach System Leuschner;* [The Leuschner oil-flotation process at the Friedrichssegen mines on the Lahn, Germany; chiefly for chalcopyrite, blende and galena].—Glückauf, March9,1912; pp. 388-393*; 50c.

English abstract in Mng. Jnl., Apr.20, p. 402; 1000 w; 35c.

Mickle, K. A.—*Flotation of Minerals.*—Roy. Soc. of Victoria, Proc., Vol. 23, No. 2, March,1911; pp. 29; $3.

Abstract in Australian Mng. Standd., April5, p. 343; April12, p. 368; April20, p. 394; April27, p. 416; 8000 w; 75c. Also in E. & M. J., Aug.12, p. 307; 6000 w; 25c. Also in Cheml. Met. & Mng. Soc. of S. Afr., Jnl., Nov.,1911, p. 136; 4500 w; 90c.

Also in Italian in Rassegna Mineraria, Oct.1, p. 157; 5600 w; 35c.

Mickle, K.—*Flotation of Minerals; Part 2;* [Special reference to tests on Broken Hill, N. S. W., ores and concentrates].—Roy. Soc. of Victoria, Proc., Vol. 24, Part 2; March,1912; 29 pp*; $3.

Reprint in Australian Mng. Standd., Apr. 11,1912; p. 333; April18, p. 357; Apr.25, p. 381; May2, p. 403; 9000 w*; 80c.

Moldenhauer, Max.—*Die Methoden der Schwimmverfahren in der Erzaufbereitung;* [Review of flotation methods in ore dressing].—Metallurgie, Jan.22,1912, p. 72; 6000 w*; 50c.

Parmelee, H. C.—*Concentration by Flotation of Dry Ore Pulp;* [H. E. Wood film-flotation dry process].—Met. & Cheml. Engg., March,1912; p. 132; 2500 w*; 25c.

Scott, W. A.—*Tube Concentrator in the Coeur d'Alene* [at Morning mill, Mullan, Idaho].—M. & S. P., Dec.23,1911, p. 809; 600 w; 20c.

Walker, T. L.—*Report on the Molybdenum Ores in Canada;* [N. S.; N. B.; Que.; Ont.; B. C.; concentration methods and uses; bibliography, etc.].—Canada Dept. Mines, Report No. 93; 64 pp*; 50c.

Abstract, chiefly on ore minerals and concentration methods, in Canadian Engr., Dec.7, p. 641; 3000 w*; 25c. Also in Mining & Engg. World, Dec.23, p. 1277; 3200 w; 10c. Also in Mng. Sci., Feb.29,1912; p. 206; 2500 w; 20c. Also in Queensland Govt. Mng. Jnl., May,1912; p. 217; 3000 w; 35c.

Wood, H. E.—*Concentration of Molybdenite Ores.*—E. & M. J., Jan.27,1912, p. 227; 2000 w*; 25c.

E. P.—*Die Redeutung des Masuts für die Erzaufbereit;* [The significance of the Elmore oil flotation process with regard to the utilization of masut and oil refinery wastes].—Petroleum, May1,1912; p. 831; 3000 w; 45c.

———. *Notes on the Elmore Flotation Process.*—Mex. Mng. Jnl., May,1912; p. 23; 1000 w*; 25c.

———. *The Hyde Flotation Process.*—E. & M. J., June1,1912; p. 106; 700 w*; 25c.

———. *The McQuisten Tube Mill Process;* [Oil flotation for zinc-lead slimes at Morning mill, Mullan, Idaho].—Mining & Engg. World, Jan.20,1912, p. 111; 750 w; 10c. Reprinted in Mines & Methods, Feb., 1912; p. 406; 750 w; 20c. Also in W. Australian Mng., etc., Jnl., April6, p. 14; 750 w; 35c.

ELECTROSTRATIC AND MAGNETIC SEPARATION

Hugon, E. C.—*A Plant for the Enrichment of Pyritic Blende Concentrates;* [Magnetic separation after roasting, Pierrefitte mines, Pyrenees, France].—Instn. of Mng. & Met'l'gy, Bull. 92; May,1912; pp. 9*; 50c.

Lämmert, R.—*Anreicherung der Eisenerze in Schweden;* [Dressing and electromagnetic concentration of iron ore in Sweden; review of papers by Nicou, 1911, and Petersson, 1903 and 1910].—Stahl & Eisen, Apr.4,1912; p. 576; 3600 w*; 75c.

MacGregor, F. S.—*Electrostatic Separation of Zinc Ores;* [Development of Huff

processes in U. S. and Mexico].—Mex. Mng. Jnl., June,1912; p. 29; 1200 w*; 25c.

MacGregor, F. S.—*Electrostatic Separation in the San Juan District;* [Huff process at Sunnyside mine near Silverton, Colo., producing 40% zinc concentrate, with lead and copper recovery].—Mng. Sci., May23, 1912; p. 448; 1000 w*; 20c.

Ruhoff, O. E.—*Magnetic Separation of Zinc-Iron Ores as Found in Southwestern Wisconsin.*—Met. & Chemi. Engg., May, 1912; p. 278; 3200 w*; 35c.

Tupper, C. A.—*Magnetic Iron Ore Concentration;* [Practice of crushing and sorting in Morway].—Mex. Mng. Jnl., Jan., 1912, p. 19; 2400 w*; 25c.

Wentworth, H. A.—*Electrostatic Concentration or Separation of Ores;* [Chiefly Huff process].—Amer. Inst. Mng. Engrs., Trans; Feb.,1912; 16 pp*; 4500 w; 50c.

Abstract in Met. & Chemi. Engg., March, p. 167; 3000 w*; 35c. Also in Mng. Sci., July11, p. 20; 2500 w*; 20c. Also in E. & M. J., June29, p. 1272; 500 w; 25c.

Italian abstract in Rassegna Mineraria, May21,1912; p. 288; 1000 w; 45c.

Woodbridge, D. E.—*Mining and Concentrating the Sydvaranger Iron Ores.*—Engg. Mag., April,1912; pp. 9-21*; 35c.

———. *Amerikanische Konstruktion für elektromagnetische Erzscheider;* [American construction in electromagnetic ore-separators].—Kali Erz u. Kohle, Dec.15,1911, p. 1293; 1000 w*; 35c.

———. *Gigantesca Explotacion de minerales de hierro pobres é impuros;* [The iron ores of Sydvaranger and their concentration].—Rev. Minera, Apr.8,1912; p. 165; 1000 w; 35c.

———. *Magnetische Anreicherung von Uralerzen in Herräng;* [Gröndal electromagnetic concentration for iron ores at Ural mines, Herräng, Sweden].—Stahl & Eisen, May16,1912; pp. 822-826*; 75c.

———. *The Sydvaranger Iron Mines in Norway;* [Mining and milling; concentration and magnetic separation].—El. Rev. (London), March1,1912; p. 345; 2000 w*; 35c.

DRY PLACERS

See also under "Gold."

Burroughs, W. G.—*Dry-Placer Mining Methods;* [Separating devices and geology of various deposits].—Mines & Minerals, March,1912; p. 486; 2400 w*; 35c.

Merrill, F. S. H.—*Dry Placers of Sonora.*—Los Angeles Mng. Rev., March2, p. 7; 1200 w*; 20c.

Amalgamation

Alling, J. H.—*Alling Electrolytic Amalgamator;* [U. S. Pat. No. 13,307, re-issue].—Mining & Engg. World, May18,1912; p. 1044; 500 w*; 10c.

Caldecott, W. A. (Editor).—*Textbook of Rand Metallurgic Practice, Vol. I.*—London, 1912; pp. —; (book).

Dowling, W. R.—*The Amalgamation of Gold in Banket Ore.*—Chem. Met. & Mng. Soc. of S. Afr., Jnl., March,1911, p. 414; 6000 w*; April, p. 499; May, p. 557; July, p. 30; Nov., p. 178; 7600 w; $3.75; Also in Instn. of Mng. & Met'l'gy, Bull. 79, April, 1911; Bull. 80, May, p. 9; Bull. 82, July, p. —; $1.10.

Abstract of paper in Mining World, May 27,1911, p. 1083; 4000 w*; 10c. Also in Mng. Sci., June 1, p. 565; June 8, p. 595; 6000 w*; 30c. Also in Pacific Miner, May, 1911, p. 12; 2500 w; 20c. Also in Canadian Mng. Jnl., June 1, p. 345; 6000 w*; 25c. Also in Met. & Chemi. Engg., June, p. 322; 1500 w*; 35c. Also in M. & S. P., June 10, p. 785; 3300 w*; 20c. Also in W. Australian Mng, etc., Jnl., July 22, p. 5; 3500 w; 50c. Also in S. Afr. Mng. Jnl., Sept.2, p. 1101; 2000 w; 35c.

James, Geo. A.—*Keeping Gold out of Concentrate;* [Cyaniding vs. Amalgamation].—M. & S. P., May4,1912; p. 629; 750 w; 20c.

Stanley, G. H., and M. T. Murray.—*Notes on the Absorption of Gold by Amalgamated Copper Plates, Cast Iron Retorts and Amalgam Trays.*—Chemi. Met. & Mng. Soc. of S. Africa, Jnl., Dec.,1911, p. 218-223; 2500 w*; (Discussion), Jan.,1912, p. 279; March, p. 365; April, p. 416; 3000 w*; $3.

Abstract of paper in Mng. Sci., March 21, p. 270; 1500 w; 20c. Also in Mining & Engg. World, May25, p. 1103; Aug.3, p. 188; 1500 w; 20c.

Rollandet, G. J.—*Treating Refractory River Gravels by Amalgamation;* [T. J. Lovett process].—Mng. Sci., Feb.1,1912; p. 132; 1800 w*; 20c.

———. *Alaska-Treadwell Amalgamation Tables.*—E. & M. J., Apr.27,1912; p. 835; 500 w*; 25c.

———. *Amalgamation Tables for Huntington Mills.*—E. & M. J., June1,1912; p. 1078; 1000 w*; 25c.

———. *Argonaut Amalgamation Tables;* [at Argonaut mill, Jackson, California].—E. & M. J., May18,1912; p. 983; 350 w*; 25c.

———. *Homestake Amalgamation Tables.*—E. & M. J., Apr.13,1912; p. 739; 500 w*; 25c.

———. *The Fixing of Plates.*—El Paso Mng. Jnl., May,1912; p. 12; 1200 w; 35c.

Cyaniding

Allen, A. W.—*Mill and Cyanide Plant Records.*—M. & S. P., Jan.27,1912; p. 174; 500 w; charts; 20c.

Allen, A. W.—*Tendencies in Cyanidation.*—Mng. Mag., Jan.,1912, p. 43; 1200 w; 45c.

Allen, A. W.—*Concentration and Cyanidation.*—Mng. Mag., Feb.,1912; p. 117; 1200 w; 45c.

Argall, P. H.—*Colorado Metallurgical Progress;* [Review for 1911].—M. & S. P., Jan.6,1912, p. 78; 3200 w*; 35c.

Austin, W. L.—*Leaching Applied to Copper Ore; XVI: Recovery of Silver and Gold Content;* [Cyaniding and other processes].—Mines & Methods, March,1912; p. 433; 5000 w; 20c. Abstract in Mex. Mng. Jnl., June, 1912; p. 36; 4500 w; 25c.

Cunningham, N.—*Heating Cyanide Solution.*—M. & S. P., Feb.24,1912; p. 315; 200 w; table; 20c.

Denny, G. A.—*Cyanidation vs. Concentration.*—Mng. Mag., April,1912; p. 293.

Dewey, F. P.—*Cadmium and Nickel in Cyanide Bullion;* [Erratic mint assays, and causes].—E. & M. J., Apr.13,1912; p. 733; 1000 w; table; 25c.

Dwyer, Wm. J.—*The Cyanide Industry;* [Production of materials in 1911].—E. & M. J., Jan.,13,1912, p. 126; 600 w; 25c.

Hamilton, E. M.—*Cyaniding of Concentrate;* [Data from Mexican mills treating gold-silver ores].—E. & M. J., Apr.27,1912; p. 839; 5000 w; 25c.

Jackson, B.—*Experimental Work on Manganese Silver Ore;* [Milling and cy-

aniding].—M. & S. P., May25,1912; p. 732; 500 w; 20c.

Janin, L.—*History of the Cyanide Process.*—E. &. M. J., June8,1912; p. 1119; 400 w; 25c.

Jones, A. H.—*Heating Cyanide Solutions.*—M. & S. P., Jan.27,1912; p. 176; 250 w; 20c.

Lamb, M. R.—*Crushing-Machines for Cyanide Plants;* [Read to Amer. Inst. Mng. Engrs].—Queensl. Govt. Mng. Jnl., May, 1912; p. 211; 1800 w; 35c. Also in S. Afr. Mng. Jnl., June22, p. 621; 2000 w; 35c.

Olson, C. R.—*A Solution Clarifier;* [Uses excelsior; Tonopah-Liberty mill].—E. & M. J., Jan.20,1912, p. 158; 500 w*; 25c.

Robertson, G. A.—*Tailing Wheels and Pumps.*—S. Afr. Mng. Jnl., Jan.6,1912; p. 657; 1600 w; 35c.

Schneider, G. W.—*Cyanidation of Gold and Silver Ores;* [Developments on Colorado tailings and concentrates].—Colo. School of Mines Quar'ly, Jan.,1912; p. 13; 1800 w; 50c.

Spiers, Jas.—*Solution Meter for Use in Cyanide Plants.*—Mining & Engg. World, June1,1912; p. 1155; 1500 w*; 10c.

Stadler, H.—*Practical Applications of the Specific Gravity Flask;* [From Cheml. Metgl. & Mng. Soc. of S. Afr., Jnl., Nov., 1911; abstract].—M. & S. P., Jan.27,1912; p. 166; 1600 w*; 20c. Also in Mines & Minerals, March, p. 489; 1600 w*; 35c. Also in Mining & Engg. World, March16, p. 614; 1800 w*; 10c. Also in Met. & Cheml. Engg., April, p. 243; 1200 w; 35c.

Steinem, C.—*Clarifying Cyanide Solutions.*—E. & M. J., Apr.13,1912; p. 739; 500 w*; 25c. Reprint in S. Agr. Mng. Jnl., May18, p. 418; 35c. Also in M. & S. P., July6, p. 11; 20c.

Thomas, J. E.—*Treatment of Sand.*—See Caldecott's "Rand Metallurgic Practice," under Transvaal.

Walker, M.—*Progress in Cyaniding;* [From Los Angeles Mng. Rev.].—Mex. Mng. Jnl., June,1912; p. 17; 1600 w; 25c.

Waterman, D.—*An Improved Cone Classifier.*—M. & S. P., Apr.20,1912; p. 567; 400 w*; 20c.

Webster, E. H.—*Cyanide Mill Metallurgical Records;* [Keeping of balance sheets].—E. & M. J., Apr.20,1912; p. 791; 3200 w*; 25c.

———. *Calculator for the Cyanide Plant;* [To bring solutions up to strength].—E. & M. J., Apr.6,1912; p. 691; 300 w; 25c.

———. *Cyaniding in Colorado;* [Brief review of progress].—Mng. Sci., Jan.11, 1912, p. 21; 750 w; 20c.

———. *Gold and Silver During* 1911; [Review of Cyanide Progress].—Met. & Cheml. Engg., Jan.,1912; 1400 w; 35c.

———. *Perjuicios ocasionados por los derrames de las plantas de cianuracion;* [Methods of waste-cyanide disposition at various leading cyaniding works in Mexico].—Mex. Inst. of Mng. & Met'gy, Vol. II, No. 4, 1911, p. 105; No. 5, p. 154; 10,000 w [in both English and Spanish].— $1.

Extracts in Mng. Sci., Oct.5,1911, p. 321; 2800 w; 20c. Also in Metgl. & Cheml. Engg., Nov.,1911, p. 588; 2500 w; 35c.

———. *Poisoning by Cyanide;* [Prevention and treatment; Transvaal commission notes].—Mining & Engg. World, Dec.16, 1911, p. 1212; 500 w; 10c.

———. *The Treatment of Tailing Dumps on the Rand.*—Mining & Engg. World, Apr. 6,1912; p. 772; 1400 w; 10c.

———. *The Way-Arbuckle Process at Benoni.*—M. & S. P., May25,1912; p. 723; 1500 w*; 20c.

———. *Troubles with Cyanide Plant, Benoni Cons. Mines.*—S. Afr. Engg., April, 1912; p. 69; 1000 w; 35c.

AGITATION; DECANTATION

Conklin, H. R.—*Piping for Continuous Agitation.*—E. & M. J., March23,1912; p. 591; 500 w*; 25c.

Fairfield, J. W.—*Agitating and Classification Device;* [Abstract of U. S. Pat. No. 1,010,244].—Mining & Engg. World, June1, 1912; p. 1154; 1200 w; 10c.

Gahl, R.—*Continuous Decantation Process;* [Abstract of U. S. Pat. No. 1,021,769]. —E. & M. J., May25,1912; p. 1046; 300 w*; 25c.

Hafer, C. C.—*The Hafer Pulp Agitator;* [Abstract of U. S. Pat. No. 1,020,694].—E. & M. J., May25,1912; p. 1038; 200 w*; 25c.

Laschinger, E. J.—*Air Lift Agitation of Slime Pulp;* [Discussion by R. Allen before Cheml. Met. & Mng. Soc. of S. Afr.; abstract].—Mining & Engg. World, Jan.13, 1912, p. 76; 2000 w*; 10c.

MacDonald, B.—*The Parral-Tank System of Slime Agitation.*—Amer. Inst. Mng. Engrs., Bull. 64, April,1912; pp. 387-406*; $1.15.

Abstract in Mining & Engg. World, Oct. 28,1911; p. 847; 2800 w*; 10c. Also in Mines & Minerals, Dec.,1911, p. 305; 4000 w*; 35c. Also in Mex. Mng. Jnl., March, 1912; p. 27; 5000 w*; 25c. Also in Mng. Sci., May16, p. 428; May23, p. 451; 4000 w*; 30c. Also in Engg. Mag., June,1912; p. 442; 1500 w*; 35c. Also in S. Afr. Mng. Jnl., May18, p. 427; 1000 w; 35c. Also in Met. & Cheml. Engg., July, p. 434; 1600 w*; 35c.

Parmelee, H. C.—*Cyaniding by Continuous Decantation in Clear Creek County, Colo.;* [Hudson Mill, Idaho Springs].—Met. & Cheml. Engg., Jan.,1912; p. 27; 3000 w*; 35c.

Trent, L. C.—*The Science of Agitation.*—Mex. Mng. Jnl., June,1912; p. 26; 3600 w; 25c. Also in Los Angeles Mng. Rev., June 15, p. 5; June22, p. 5; 3600 w; 30c.

Wood, P. K.—*Wood's Cyanide Agitator.*—Mines & Methods, March,1912; p. 444; 1000 w*; 20c.

PRECIPITATION

Allén, A. W.—*Premature Precipitation.*—Mng. Mag., Feb.,1912; p. 121; 500 w; 45c.

Bosqui, D.—*Precipitating Gold and Silver from Cyanide Solutions;* [Abstract of U. S. Pat. No. 1,018,604].—Mining & Engg. World, June15,1912; p. 1255; 500 w*; 10c.

Bosqui, D.—*Bosqui Zinc-Dust Feeder;* [U. S. Pat. No. 1,018,604; abstract].—E. & M. J., June1,1912; p. 1095; 800 w*; 25c.

Browne, R. S.—*Premature Precipitation of Gold in Cyanidation.*—Mining & Engg. World, Dec.2,1911, p. 1108; 5100 w; 10c.

Abstract in Engg. Mag., Feb.,1912, p. 818; 1500 w; 35c. Reprint of paper in the Cheml. Met. & Mng. Soc. of S. Afr., Jnl., March, p. 386-391; 5100 w; 90c.

Dwyer, Wm. J.—*Zinc Dust in* 1911; [Review of production and shipments].—E. & M. J., Jan.13,1912, p. 122; 500 w; 25c.

Foster, D. F.—*Re-Precipitation;* [Experiences with Parrall and Ashanti tailings]. —Mng. Mag., Jan.,1912, p. 56; 600 w; 45c.

Irvin, D. F.—*An Electrical Drier for Zinc Precipitate.*—M. & S. P., March16,1912; p. 405; 500 w*; 20c.

Johnson, E. H.—*Precipitation.*—See Caldecott's "Rand Metallurgic Practice," under Transvaal.

Morris, A. W.—*Automatic Zinc-Dust Feeding.*—M. & S. P., Feb.10,1912; p. 249; 1000 w*; 20c.

Sharwood, W. J.—*Zinc Dust Tests.*—Chem. Met. & Mng. Soc. of S. Afr., Jnl., Feb.,1912; p. 332; May, p. 469; 4300 w; $1.60.

Reprinted in E. & M. J., May11,1912; p. 943*; 25c. Also in M. & S. P., May11, p. 659*; 20c. Also in Mng. Sci., May23, p. 16; May30, p. 469; 30c. Also in Mining & Engg. World, Aug.3, p. 204; 1000 w; 10c.

Webster, E. H.—*Sodium Sulphide as Cyaniding Precipitant.*—E. & M. J., May18, 1912; p. 973; 1800 w; 25c.

———. *Metallic Zinc in Zinc Dust;* [Methods of Determination].—E. & M. J., Jan.20,1912, p. 165; 600 w*; 25c.

SLIMES; THICKENERS; FILTERS

Allen, A. W.—*Air Lifting of Slime Pulp.*—Mng. Mag., April,1912; p. 284; 1800 w*; 45c.

Arbuckle, A. J.—*The Arbuckle Pulp Thickener.*—Mining & Engg. World, June 15,1912; p. 1268; 300 w*; 10c.

Bettel, Wm.—*Treatment of Accumulated Slimes;* [Orion slimes plant on Black Reef].—S. Afr. Mng. Jnl., Jan.27,1912; p. 745; 1200 w; 35c. Reprinted in Mining & Engg. World, Apr.27, p. 910; 1200 w; 10c. Also in W. Australian Mng. Jnl., June, p. 9; 1000 w; 35c.

Bosqui, F. L.—*Vacuum Filtration on the Rand;* [Tests of Butters plant at Bantjes Con., New Modder and Crown Reef].—S. Afr. Mng. Jnl., Jan.6,1912; p. 635; 1300 w; 35c. Reprint in Chem. Met. & Mng. Soc. of S. Afr. Jnl., April, p. 428; 90c.

Forbes, D. L. H.—*The Settling of Mill Slimes.*—E. & M. J., Feb.24,1912; p. 411; 3000 w; 25c.

Fowler, G. J.—*The Separation of Solids from Liquids with Special Reference to Sewage Purification.*—Soc. of Chem. Ind'y, Jnl., Dec.15,1911, p. 1343; 4000 w*; 65c.

Fox, C. H.—*Acid-Treating Filter Leaves;* [at West End Mill, Tonopah, Nev.].—E. & M. J., March30,1912; 400 w*; 20c.

Lamb, M. R.—*The Lamb Slime Thickener;* [Abstract of U. S. Pat. No. 1,007,954].—Mining & Engg. World, June8,1912; p. 1217; 250 w*; 10c.

Lowden, H. B.—*A New Slime Density Table.*—Met. & Chem. Engg., June,1912; p. 369; 100 w; tables; 35c.

Mennell, J. L.—*The Use of Dorr Thickeners as an Accessory to Butters Vacuum Filters in the Separation of Rich Solutions from Residues;* [In English and in Spanish].—Mex. Inst. of Mng. & Met'gy, Trans.; 1911; pp. 143-149; 2500 w*; $1.

Abstract in Mng. Sci., Feb.22, p. 193; 1800 w*; 20c. Also in Mining & Engg. World, March16, p. 607; 2500 w*; 10c. Also in Mex. Mng. Jnl., May, p. 25; 2100 w*; 25c. Also in Engg. Mag., June,1912; p. 460; 1600 w; 35c.

Rollandet, G. J.—*Separation of Liquids from Ore Pulp;* [Caldecott patent].—Mng. Sci., Feb.29,1912; p. 210; 750 w*; 20c.

Möhrle, Th.—*Neues in der Schlammaufbereitung;* [Newer developments in the handling, pressing and treatment of coal slimes and their utilization].—Kohle & Erz, Jan.15,1912, p. 52; Jan.22, p. —; 2000 w*; 50c.

Moldenhauer, M.—*Das Filter Bei der Aufbereitung feiner sulfidischer Sande und Schlämme;* [Filters in the concentration of fine sulphide sands and slimes, especially copper].—Metallurgie, Feb.8,1912; p. 99; 2500 w*; 50c.

Nicol, W. J.—*Slimes Treatment at the Lord Nelson Mine;* [St. Arnaud, Vict.].—Mng. & Engg. Rev., Apr.,1912; p. 290; 2100 w*; 35c.

Reprint in Mining Engg. World, Aug.3, p. 189; 2100 w*; 10c.

Stone, C. J.—*A Gravity Filter Plant.*—E. & M. J., Feb.17,1912; p. 368; 2000 w*; 25c.

Sweetland, E. J.—*Recent Improvements in Filtration Methods;* [Read to Amer. Chem. Soc., Jan.,1912].—Met. & Chem. Engg., Feb.,1912, p. 114; 2800 w*; 35c. Also in Jnl. of Indl. & Engg. Chemy., Feb., p. 115; 2800 w*; 65c. Also in Mining & Engg. World, Apr.20, p. 863; 2700 w*; 10c.

White, H. A., and W. R. Dowling.—*Slime Treatment; Part 1, General Consideration,* by White; *Part 2, Works Practice,* by Dowling.—See Caldecott's "Rand Metallurgic Practice," under Transvaal.

Young, G. J.—*Slime Filtration.*—Amer. Inst. Mng. Engrs., Trans. for Oct.,1911; pp. 839-872*; $1.15.

Abstract in M. & S. P., Oct28,1911, p. 552; 2000 w*; 20c. Also in E. & M. J., Nov.4, p. 885; 5500 w; 25c. Also in Mng. Sci., Dec.21. p. 551; Dec.28. p. —; 6000 w*; 30c. Also in Chem. Met. & Mng. Soc. of S. Africa, Jnl., Feb.,1912; p. 341; 2500 w*; 90c.

———. *Use of Lactic Acid for Cleansing Filtering Mediums;* [at Ajax mill, Victor, Colo.].—Met. & Chem. Engg., April,1912; p. 249; 1000 w*; 35c.

TUBE MILLING; FINE GRINDING

See under "Reduction."

CHEMISTRY

Allen, A. W.—*Laboratory Cyanide Tests.*—M. & S. P., Feb.17,1912; p. 282; 1000 w; 20c.

Bahney, L. W.—*Rapid Estimation of Available Calcium Oxide in Lime Used in the Cyanide Process.*—Amer. Inst. Mng. Engrs., Trans. for Oct.,1911, p. 895; 1200 w; $1.15.

Reprint in M. & S. P., Oct.14, p. 482; 20c. Also in Mining & Engg. World, Nov. 4, p. 911; 10c. Also in Mng. Sci., Jan.18, 1912, p. 49; 20c. Abstract in E. & M. J., Nov.18, p. 997; 500 w; 25c. Also in Mines & Minerals, Jan.,1912, p. 368; 1200 w*; 35c. Also in W. Australian Mng. etc., Jnl., Dec.16, p. 7; 1200 w; 50c. Also in Chem. Met. & Mng. Soc. of S. Afr., Jnl., April, 1912; p. 419; 1200 w; 90c.

Bancroft, Geo. J.—*The Testing of Ores in the Cyanide Treatment.*—Mng. Sci., March 7,1912; p. 228; 1800 w; 20c.

Bettel, Wm.—*An Accurate Method for Determining Gold and Silver in Working Cyanide Solutions.*—S. Afr. Mng. Jnl., Feb. 3,1912; p. 795; 1500 w; 35c. Abstract in Mining & Engg. World, Apr.6, p. 775; 1300 w; 10c. Also in Queensl. Govt. Mng. Jnl., April, p. 163; 1300 w; 35c.

Caldecott, W. A.—*Chemistry of Banket Ore Treatment.*—See under Transvaal.

Coghill, W. H.—*Refractory Manganese-Silver Ores;* [Cyaniding tests on Arizona, Durango and Jalisco ores].—M. & S. P., June1,1912; p. 754; June8, p. 794; 9000 w; 30c.

Coghill, W. H.—*Iron as Cyanicide.*—M.

& S. P., March16,1912; p. 413; 300 w; 20c.

Cohen, L.—*Miscellaneous Cyanide Experiments.*—Met. & Chemi. Engg., April,1912; p. 203; 3000 w; 35c. Reprint in Mex. Mng. Jnl., July, p. 39; 25c.

Crichton, C.—*The Assay of Gold-Bearing Cyanide Solutions by Electrolysis.*—Chemi. Met. & Mng. Soc. of S. Afr., Jnl., Sept.,1911, p. 90; 1100 w*; 90c. (Discussion), Dec., p. 223; March, p. 355; 2000 w; $1.60.

Reprinted in S. Afr. Mng. Jnl., Sept.23, 1911, p. 79; 1100 w; 35c. Abstract in E. & M. J., Nov.18, p. 980; 800 w*; 25c. Also in Mng. Sci., Nov.30, p. 499; 1100 w; 20c. Also in M. & S. P., Dec.2, p. 710; 800 w; 20c. Also in Mex. Mng. Jnl., Jan.,1912, p. 24; 1000 w; 30c. Also in Mining & Engg. World, Feb.3,1912, p. 301; 1000 w; 10c. Also in Mines & Methods, Jan.,1912, p. 395; 1200 w; 25c. Also in Mines & Minerals, March, p. 496; 1200 w*; 35c.

Crosse, A. F.—*Mineral Sulphates and Arsenates as Cyanicides.*—Chemi. Met. & Mng. Soc. of S. Afr., Jnl., April,1912; p. 405; 2000 w; 90c. Abstract in Mining & Engg. World, June1,1912; p. 1139; 1800 w; 10c. Also in Mng. Sci., June27, p. 542; 1800 w; 20c. Also in M. & S. P., July6, p. 6; 1400 w; 20c.

Gibson, W. L.—*Assay of Zinc Box Precipitates.*—Mining & Engg. World, Apr.27, 1912; p. 930; 400 w; 10c.

James, Geo. A.—*Making Laboratory Cyanide Tests.*—M. & S. P., Dec.30,1911, p. 839; 1000 w*; 20c.

Janin, L.—*Physical Chemistry and Cyanidation.*—E. & M. J., June15,1912; p. 1165; 1500 w; 25c.

Johnston, A. McA.—*On Testing; Cyanide Solutions, Supplies, Gold Ore, and Testing a Plant in Operation.*—See Caldecott's "Rand Metallurgic Practice," under Transvaal.

Layng, H. R.—*Method for Assaying Zinc-Box Precipitate.*—Mining & Engg. World, March23,1912; p. 659; 2100 w*; 10c.

Linderfelt, T. C. and J. K. Stewart.—*Laboratory Test on Cyanide Ore;* [Methods of determining suitability of ores to treatment].—Mines & Minerals, June,1912; p. 666; 1500 w*; 35c.

Randall, J.—*Laboratory Cyanide Tests;* [Long-pipe percolators and agitation apparatus].—M. & S. P., March20,1912; p. 477; 1000 w; 20c.

Todd, W. H.—*Sampler for Cyanide Plants.*—E. & M. J., March16,1912, p. 541; 300 w*; 25c.

———. *Lime in Cyaniding.*—E. & M. J., May4,1912; p. 869; 750 w; 25c.

ELECTROCYANIDING

Aldrich, T. H.—*Electrolytic Oxygen in Cyanide Solution;* [Paper presented to Amer. Inst. Mng. Engrs., San Francisco, 1911].—M. & S. P., Oct.14,1911, p. 483; 1500 w; 20c. Also in Mining & Engg. World, Oct.21, p. 791; 2100 w; 10c. Also in Chemi. Met. & Mng. Soc. of S. Afr., Jnl., Jan.,1912; p. 300, 1200 w; 90c. Also in Mng. Sci., March14,1912; p. 246; 2200 w; 20c. Also in Chemi. Met. & Mng. Soc. of S. Afr., Jnl., Jan.,1912; p. 300; 1200 w; 90c.

Abstract in Spanish in Mex. Mng. Jnl., June,1912; p. 56; 1800 w; 25c.

Grube, G.—*Beiträge zur Passivitätstheorie;* [Current-potential tests of gold and other metals in anodic polarization in neutral and alkaline potassium ferro-ferricyanide solutions].—Zts. f. Elecktrochemie, March15,1912; p. 189; 14,000 w*; 45c.

Nicholl, B. G.—*Cyanide Regeneration.*—Mng. & Engg. Rev., Feb.,1912, p. 205; 3000 w*; 45c. Reprint in M. & S. P., March16, 1912; p. 406; 3000 w; 20c. Abstract in Chemi., Met. & Mng. Soc. of S. Afr. Jnl.; May,1912; p. 487; 2200 w; 90c.

Warwick, A. W.—*The Colburn Mill and the Clancy Process;* [Abstract from Mng. Sci., Nov.9,1911].—Mining & Engg. World, Jan.13,1912, p. 74; 1200 w; 10c.

Weber, M. G.—*Effect of Electric Current on Cyanide Solutions and a Simple Way for their Preparation;* [In electroplating; read to Electroplaters' Asso., Feb.,1912].—Met. & Chemi. Engg., March, 1912, p. 152; 1000 w; 35c.

Wheelock, R. P.—*Cyanide Regeneration.*—M. & S. P., Apr.6,1912; p. 506; 1500 w; 20c.

Wheelock, R. P.—*Regeneration of Cyanide Solutions;* [Abstract of U. S. Pat. No. 996,179].—Mining & Engg. World, May18, 1912; p. 1044; 300 w; 10c.

Worcester, S. A.—*Colburn-Ajax Mill, Victor, Colo;* [Using Moore-Clancy process]. E. & M. J., Apr.13,1912; p. 753; 2700 w*; 25c.

CYANIDE MILLS

Argall, P.—*Reducing Costs, Increasing Profits;* [Cyanidation of Cripple Creek, Colo., $3 sulpho-telluride ore].—Banker & Investor Mag., Oct.,1911, p. 368; 1800 w; 50c. Reprint in Mining & Engg. World, Apr.27,1912; p. 915; 1500 w; 10c.

von Bernewitz, M. W.—*Ore Treatment at the Associated Mine, Kalgoorlie;* [Roasting and cyaniding sulpho-tellurides].—Mng. Mag., Feb.,1912; p. 127; 3000 w*; 45c. Reprint in W. Australian Mng, etc., Jnl., March16, p. 7; 3000 w; 35c.

Cole, A. A.—*The Mining Industry in that part of Northern Ontario Served by the T. & N. O. Ry.,* 1911; [Includes flow sheets of Cobalt and Porcupine mills].—Toronto, 1912; 57 pp.*; 75c.

Dodge, W. R.—*Retreatment of Mill Tailings at Cripple Creek, Colo.*—Mng. Sci., Dec.14,1911; p. 528; 2400 w*; 20c. Abstract in Mng. & Engg. World, Feb.17,1912; p. 410; 1200 w*; 10c.

Downey, Chas. J.—*Cyaniding the Sulphide Ores of Idaho Springs;* [Colo.; Hudson mill].—Mng. Sci., March21,1912; p. 258; 2000 w*; 20c.

Drucker, A. E.—*Kuk San Dong Cyanide Plant.*—[Oriental Consol. Mng. Co., Chosen]. M. & S. P., Jan.13,1912, p. 103; 600 w; 20c.

Dufourcq., Edw. L.—*Chispas Cyanide Plant, Arizpe, Sonora.*—Columbia Univ. School of Mines Quar'ly, Nov.,1911, p. 18-30*: 65c.

Abstract in Mining & Engg. World, Jan. 20,1912, p. 113; 4500 w; 10c. Also in E. & M. J., Jan.27, p. 215; 4500 w*; 25c. Also in Mex. Mng. Jnl., Feb., p. 27; 4800 w*; 25c.

Edmands, H. R.—*Cyaniding Weathered Pyritic Tailing;* [Mulline, W. Australia].—E. & M. J., March23,1912; p. 605; 2800 w; 25c.

Abstract in Chemi., Met. & Mng. Soc. of S. Afr. Jnl., May,1912; p. 485; 1800 w; 90c.

Gieser, H. S., and C. A. Tupper.—*Mine and Mill of the Brakpan Mines, Ltd., Rand.*—M. & S. P., Dec.23,1911, p. 796; 3000 w*; 20c.

Girault, E.—*The "Purisima Grande" Cyanide Mill in Pachuca;* [In Spanish and in English].—Mex. Instn. of Mng. & Met'l'gy, Trans.; Vol. 11, No. 6; 1912; pp. 205-213*; 75c. Abstract in M. & S. P., March23,

1912, p. 433; 1500 w; 20c. Also in Mng. Sci., April4, p. 314; 1400 w; 20c.

Hargrave, C. L.—*Cyaniding at Nova Scotia Mill;* [Cobalt, Ontario; silver sulphides and antimonides].—E. & M. J., June 8,1912; p. 1133; 2500 w; 25c.

Holt, T. P.—*Metallurgy of Mercur Gold Ores;* [Practice at first American cyanide mill].—Mines & Minerals. Jan.,1912, p. 355; 1800 w*; 35c. Abstract in Mining & Engg. World, Feb.10, p. 359; 1200 w*; 10c.

Hutchinson, J. W.—*Operating Costs at the Goldfield Consol. Mill, Nev.*—M. & S. P., Jan.20,1912, p. 137-140; 1000 w; charts; 20c.

Jarman, A.—*Mining and Ore Treatment at the Talisman Mine, Karangahake, N. Z.;* [Read to Australasian Inst. Mng. Engrs.; abstract].—Mng. & Engg. Rev., Feb.,1912; p. 193; 8000 w*; 45c. Also in Mines & Minerals, Feb., p. 443; 4800 w*; 35c.

Abstract on cyaniding in Met. & Cheml. Engg., April,1912, p. 242; 1000 w; 35c.

Kidder, S. J.—*Operating Costs at the Pittsburgh-Silver Peak Mill;* [Blair, Nevada].—M. & S. P., Feb.10,1912; p. 239-242; charts; 20c.

Lass, W. P.—*The Cyanide Plant at the Treadwell Mines, Alaska;* [Cyaniding concentrates].—Amer. Inst. Mng. Engrs., Trans. for Oct.,1911; 34 pp*; $1.15.

Abstract in M. & S. P., Oct.21,1911; p. 514; 6300 w*; 20c. Also in Mng. Sci., Apr. 18,1912; p. 346; Apr.25, p. 369; 5000 w*; 30c.

Linderfelt, T. C., and J. K. Stewart.—*Stratton's Independence Mill;* [Treatment of low-grade tailings at Cripple Creek, Colo.].— E. & M. J., Feb.10,1912; p. 311; 2700 w*; 25c.

Perry, R. W.—*Cyaniding Tailings in Colombia;* [Santa Rosa de Osos district, Antioquia].—E. & M. J., March9,1912, p. 498; 2500 w*; 25c.

Scott, W. A.—*The Nevada Hills Mill, Fairview, Nev.*—M. & S. P., Jan.20,1912, p. 343; 1000 w*; 20c.

———. *Goldfield, Nevada. Cyanide Mill.*—Mines & Minerals, May,1912; p. 610; 1300 w*; 35c.

———. *Robinson Deep New Plant.*—S. Afr. Mng. Jnl., Apr.6,1912; p. 189; 1000 w*; 35c.

———. *Remodeling the Smuggler-Union Mill, Telluride, Colo.*—Met. & Cheml. Engg., April,1912; p. 195; 1000 w*; 35c.

———. *The Crown Mines New Reduction Plant.*—S. Afr. Mng. Jnl., March16, 1912; p. 45; 1000 w*; 35c.

———. *The Modder B Machinery and Plant;* [Visit by S. Afr. Inst. of Engrs.].—S. Afr. Mng. Jnl., March23,1912; p. 119; 1500 w; 35c. Also in S. Afr. Engg., May, p. 81; 1500 w*; 35c.

GENERAL PAPERS AND TEXT-BOOKS

Browne, R. S.—*Progress in Cyano-Metallurgy in* 1911; [I: Crushing and grinding; II: Agitation, precipitation, filtration].—Mining & Engg. World, Feb.3,1912; p. 287; Feb.10, p. 348; 8000 w; 20c.

Clark, D.—*Australian Mining and Metallurgy.*—Melbourne, 1911; 600 pp*; $6.50 (book).

James, Alfr.—*Progress in Cyanidation of Gold and Silver Ores During* 1911.—M. & S. P., Jan.6,1912, p. 37; 7000 w*; 35c. Also in Mex. Jnl., Jan.,1912; p. 38; 25c. Also in S. Afr. Mng. Jnl., Feb.10, p. 834; Feb. 17, p. 869; Feb.24, p. 901; March2, p. 945; 7000 w; 80c.

MacFarren, H. W.—*Textbook of Cyanide Practice.*—New York, 1912; pp. 291*; $3 (book).

Robinson, B. A.—*Cyanidation in* 1911.—E. & M. J., Jan.6,1912, p. 45; 3000 w; 25c.

Rollandet, G. J.—*Cyaniding Sulphides;* [Abstract from Mng. Sci.].—Mex. Mng. Jnl., March,1912; p. 25; 1600 w; 25c. Also in Queensland Govt. Mng. Jnl., Feb.,1912; p. 77; 1100 w; 35c.

Mill: General and Miscellaneous

Alderson, V. C.—*The Experimental Ore-Dressing and Metallurgical Plant of the Colorado School of Mines.*—Met. & Cheml. Engg., May,1912; p. 260; 3500 w*; 35c. Also in Colo. School of Mines Quar'ly, July, 1912; 10 pp.*; 50c.

Allen, A. W.—*The Statement of Working Costs;* [In milling gold ores].—M. & S. P., Feb.3,1912; p. 204; 1000 w; charts; 20c.

Allen, A. W.—*The Estimation of Battery Tonnage.*—M. & S. P., Feb.24,1912; p. 308; 2000 w; 20c.

Bell, R. N.—*13th Annual Report of the Mining Industry of Idaho for* 1911; [Notes on various mills].—Boise, 1911; 135 pp*; $1.

Copeland, D.; H. T. Mann, and H. A. Roesler.—*Metallurgical and Ore-Dressing Laboratories of the Missouri School of Mines & Metallurgy.*—Mo. School of Mines, Bull; Feb.,1912; pp. 3-49*; 50c.

Eschenbruch, —. *Neuere Fortschritte auf dem Gebiete der Kohlenaufbereitung;* [Innovations in coal dressing in Prussia].—Zts. f. d. Berg-, H-, & Salinenw., Vol. 60, No. 1; 1912; pp. 1-28*; $1.50.

Frenzel, A. B.—*World-Wide Influence of a Denver Ore-Testing Plant;* [Describes H. E. Wood mill equipment in Denver].—Mng. Sci., Jan.25,1912, p. 107; 2000 w*; 25c.

Hansen, G. T.—*Ore-Testing Laboratory, Missouri School of Mines.*—Mining & Engg. World, Dec.16,1911, p. 1215; 1000 w*; 10c.

Jacobs, E.—*Metallurgy in British Columbia in* 1911.—See Brit. Columbia.

Johnston, A. McA.—*On Testing; Cyanide Solutions, Supplies, Gold Ore, and Testing a Plant in Operation.*—See Caldecott's "Rand Metallurgic Practice," under Transvaal.

Schott, O.—*The Dust Problem in Portland Cement Plants and Its Solution;* [Read to Amer. Soc. Mechl. Engrs., Dec.,1911].—Engg. News, Jan.18,1912; p. 110; 5000 w, 25c.

Semple, C. S.—*Government Aid to Miners;* [Discusses state-aided custom mills and Western Australia system].—E. & M. J., Dec.23,1911, p. 1213; 1600 w; 25c.

Ralston, O. C.—*Costs of Milling in Leadville, Colo.*—Mines & Minerals, May,1912; p. 619; 750 w; 35c.

Taylor, G. M.—*Construction Costs at the New Portland Mill, Cripple Creek, Colo.*—M. & S. P., Jan.6.1912, p. 12; chart; 35c.

Wheeler, F. G.—*The Adoption of the Centrifugal Pump to Chemical Problems;* [Read to Amer. Inst. Cheml. Engrs., Dec., 1911].—Jnl. of Ind'l & Engg. Chem'y, April, 1912; p. 288; 9000 w*; 65c.

Whittuck, J. C. S.—*A Simplified Challenge Feeder.*—E. & M. J., Jan.27,1912, p. 209; 500 w*; 25c.

Wiley, B.—*Direct Current and Alternating Current Mill Motors for Auxiliary Drives.*—Amer. Inst. El. Engrs., Proc.; May,1912; pp. 545-558*; $1.15. Abstract

in Iron Age, May16, p. 1205; 1000 w; 30c. Also in Ind'l Engg., June,1912; p. 460; 4000 w*; 35c.

Young, Geo. J.—*The Position on the Comstock;* [Reviews recent mining and milling treatment and costs].—E. & M. J., Jan.20,1912, p. 167; 4500 w*; 25c.

———. *Bin for Concentrate;* [in mills of Joplin district, Mo.].—E. & M. J., May 11,1912; p. 936; 500 w*; 25c.

———. *Built-Up Wooden Water Tanks;* [Plank water-tight tanks in Joplin district].—E. & M. J., May25,1912; p. 1031; 350 w*; 25c.

———. *Ore Valuation in Recovery Works;* [Problem of tonnages and extraction measurements].—S. Afr. Mng. Jnl., May4,1912; p. 353; 2000 w; 35c.

TEXT-BOOKS AND GENERAL WORKS

Bruce, J. L.—*Ore Dressing in the Joplin District.*—E. & M. J., Feb.24,1912; p. 405; March2, p. 459; March9, p. 501; March16, p. 553; 15,000 w*; 75c.

Clark, D.—*Australian Mining and Metallurgy.*—Melbourne, 1911; 600 pp*; $6.50 (book).

Ketchum, M. S.—*The Design of Mine Structures;* [Headworks, hoisting and stresses; coal tipples, washers, and breakers; roof trusses and frame structures; bins and retaining walls; cranes and girders; miscellaneous mine structures].—New York,1912; 459 pp*; $4 (book).

Martin, Al. H.—*Mining and Milling Costs in the Goldfield District.*—Mining & Engg. World, June8,1912; p. 1241; 2100 w*; 10c.

McClave, J. M.—*Recent Developments in Zinc Ore Dressing.*—Mng. Sci., Jan.25,1912, p. 90; 2000 w; 25c.

Power, F. D.—*Coalfields and Collieries of Australia.*—Melbourne, 1912; 412 pp*; $7 (book).

Shepard, F. E.—*Progress in Mill Design;* [Lecture to Colorado mining men, Telluride, Feb. 23, 1912].—E. & M. J., March16,1912; p. 543; 6000 w; 25c. Also in Met. & Chemi. Engg., April,1912, p. 215; 6000 w; 35c. Also in Queensland Govt. Mng. Jnl., May, p. 220; 6000 w; 35c.

INDIVIDUAL ORE-DRESSING PLANTS

von Bernewitz, M. W.—*Customs Treatment at Kalgoorlie;* [Sampling, roasting and milling at Associated Northern Blocks mine and mill].—Mng. & Engg. Rev., March,1912; p. 239; 2700 w*; 35c.

Cole, A. A.—*The Mining Industry in that part of Northern Ontario Served by the T. & N. O. Ry.,* 1911; [Includes flow sheets of Cobalt and Porcupine mills].—Toronto, 1912; 57 pp.*; 75c.

Gascoyne, R.—*A Modern Reduction Plant on the Witwatersrand;* [Modder B mill].—Mining & Engg. World, May4,1912; p. 953; 1600 w*; 10c.

Gieser, H. S., and C. A. Tupper.—*Mine and Mill of the Brakpan Mines, Ltd., Rand.*—M. & S. P., Dec.23,1911, p. 796; 3000 w*; 20c.

at the Talisman Mine, Karangahake, N. Z.; [Read to Australasian Inst. Mng. Engrs.; abstract].—Mng. & Engg. Rev., Feb.,1912; p. 193; 8000 w*; 45c. Also in Mines & Minerals, Feb., p. 443; 4800 w*; 35c.

Kidder, S. J.—*Operating Costs at the Pittsburgh-Silver Peak Mill;* [Blair, Nevada].—M. & S. P., Feb.10.1912; p. 239-242; charts; 20c.

Linderfelt, T. C., and J. K. Stewart.—*Stratton's Independence Mill;* [Treatment of low-grade tailings at Cripple Creek, Colo.].—E. & M. J., Feb.10,1912; p. 311; 2700 w*; 25c.

Scott, W. A.—*The Nevada Hills Mill, Fairview, Nev.*—M. & S. P., Jan.20,1912, p. 343; 1000 w*; 20c.

Worcester, S. A.—*Colburn-Ajax Mill, Victor, Colo.;* [Using Moore-Clancy process].—E. & M. J., Apr.13,1912; p. 753; 2700 w*; 25c.

DRYING

Dietz, C. F., and D. V. Keedy.—*Abrasion and Dust Losses in Drying Ores;* [Read to Amer. Inst. Mng. Engrs., N. Y., 1912].—Mining & Engg. World, May11, 1912; p. 993; May18, p. 1045; 5000 w*; 20c. Amer. Inst. Mng. Engrs., Bull. 67, July,1912; pp. 717-738*; $1.15.

Hausbrand, E.—*Das Trocknen mit Luft und Dampf; Manual of Steam and Air-Drying.*—Berlin,1911; 142 pp*; $2 (book).

Meuskens, C.—*Moderne Trocknungsanlagen für Kalisalze;* [Modern drying plants for potash salts].—Techn. Blätter, Feb.17, 1912; p. 49; June8, p. 190; 6000 w*; 50c.

Nicoll, J. S.—*Mechanical Drying Furnaces.*—Mines & Minerals, Apr.,1912; p. 561; 1600 w*; 35c.

Viola, B.—*Calculations of Vacuum Pans*—Met. & Cheml. Engg., Jan.,1912; p. 31; 4000 w; 35c.

Viola, B.—*Vacuum Pans with Jackets.*—Met. & Cheml. Engg., Feb.,1912, p. 102; 1000 w*; 35c.

CONVEYORS AND HANDLING

See "Transportation; Storage; Handling," in last chapter. The papers describing individual ore-dressing and coal-dressing plants also contain important contributions on this subject.

CHAPTER XI.—METALLURGY AND CHEMISTRY.

Electrometallurgy; Electrochemistry

ELECTROMAGNETIC AND ELECTROSTATIC ORE-DRESSING

See concentration, Chapter 10.

ELECTROLYTIC METAL REFINING

See also "Metallurgy: Plating; Coloring."

Assaeievf, V. P.—*Production of Copper in the Kyshtim District;* [smelting and refining; abstract from "Gornyi Journal"].—Mng. Jnl., May4,1912; p. 438; 1200 w; 35c. Also in M. & S. P., June29, p. 891; 1000 w; 20c.

Austin, W. L.—*Leaching Applied to Copper Ore;* [XIII: Laszczynski electrolytic process].—Mines & Methods, Dec.,1911, p. 368; 5000 w; 25c.

Austin, W. L.—*Leaching Applied to Copper Ore; XIV: Leaching Rock Without Mining.*—Mines & Methods, Jan.,1912; p. 381; 4600 w; 35c.

Austin, W. L.—*Leaching Applied to Copper Ore; XV; Electrolysis of Chlorides.*—Mines & Methods, Feb.,1912; p. 403; 5200 w; 20c. Abstract in Mex. Mng. Jnl., April; p. 36; 4500 w; 25c.

Austin, W. L.—*Leaching Applied to Copper Ores; XVII: Electrolytic Deposition of Copper from Solutions.*—Mines & Methods, April,1912; p. 465; May, p. 474; June, p. 497; 14,000 w; 45c. Abstract in Mex. Mng. Jnl., July, p. 28; 4000 w; 25c.

Bairsto, G. E.—*Some Properties of Aluminium-Anode Films.*—Faraday Soc., Trans., Nov.,1911, p. 1-30*; $4.00.

Bennett, C. W.—*Tensile Strength of Copper on a Rotating Cathode.*—Amer. Electrochem. Soc., Trans.; 17 pp.; 4500 w*; 50c.

Abstract in M. & S. P., Apr.27, p. 590; 1500 w; 20c. Also in Met. & Chemi. Engg., May, p. 298; 1200 w*; 35c.

Downer, F. M.—*The Denver Mint and Its Operation;* [Read to Colo. Electric Club].—Mng. Sci., May16,1912; p. 426; 1400 w; 20c.

Durham, E. B.—*Electrolytic Refining at the U. S. Mint, San Francisco, Cal.;* [Silver, gold, platiniferous copper].—Amer. Inst. of Mng. Engrs., Trans. for Oct.,1911, pp. 811-838*; $1.15.

Abstract in E. & M. J., Nov.4, p. 901; Nov.11, p. 950; 6500 w*; 35c. Also in Mines & Minerals, Jan.,1912; p. 361; 5000 w*; 35c. Abstract on silver refining, Mining & Engg. World, Nov.18, p. 1010; 2800 w*; 10c.

Dux, —. *Die Aluminium Industrie A. G. Neuhausen und ihre Konkurrenz-Gesellschaften;* [The Neuhausen Aluminum Industry Co. and its affiliated concerns].—Luzerne, Switzerland; 1912; pp. —; $1. (pamphlet).

Emrich, H. H.—*Electrolytic Copper Refining.*—Amer. Inst. Mng. Engrs., Trans.; read Feb.,1912; pp. ——; $1.15.

Short abstract in Met. & Chemi. Engg., March, p. 171; 500 w; 35c.

Flusin, G.—*L'industrie de l'aluminium;* [Aluminum industry].—Houille Blanche, Oct.-Nov.,1911, pp. —; 50c.

Flusin, G.—*Gewinnung von Alumium;* [Some methods of aluminum production in France; German translation of article in Houille Blanche, Oct.-Nov.,1911].—Zts. f. Elektrochemie, March1,1912; p. 174; 3000 w*; 45c.

Guillet, L.—*Praktische Erfahrungen bei der Aluminiumerzeugung im elektrischen Ofen;* [Practical experiences with electrometallurgy of aluminum; German abstract from paper in Soc. d. Ingrs. Civ. France, Bull. No. 10, 1911].—Elektrotechnik & Maschinenbau, Jan.28,1912, p. 85; 500 w; 35c.

Guillet, L.—*Metodos y progresos metalurgicos del cobre;* [Progress in smelting and electrolysis of copper; Spanish abstract of paper in Soc. d. Ingrs. Civ. France, Mémoires, 1911].—Mex. Mng. Jnl., Jan.,1912, p. 53; 4400 w; 25c.

Jocolliet, P.—*Procédés électrolytiques pour le désétamage et la récupération des déchets de fer-blanc, système P. Jocolliot;* [Jocolliot electrolytic detinning process].—Jnl. d. Mines & Mét'l'gie, Feb.,1912; p. —; 50c. Abstract in Rev. d'Electrochemie, April,1912; p. 111; 1000 w; 65c.

Jones, H. C.—*Electricity as Applied to Chemistry;* [Theory of electrolysis and electrolytic refining, etc.].—E. & M. J., May 25,1912; p. 1041; 4500 w; 25c.

Lorenz, Dr.—*Ueber elektrolytische Kupferraffinerie;* [Electrolytic refining of copper; practice at various American and European works; read to Physikalischer Ver. zu Frankfurt a. M., Feb.24,1912; abstract].—Chemiker Ztg., March26,1912; p. 336; 1000 w; 35c.

Okada, Yoichi.—*Der "Mabuki" Prozess;* [The Mabuki process of copper recovery from ore as practiced in Japan].—Freiberg, Saxony; 1911; 20 pp.; 6 figs.; $1.00; (pamphlet).

Sammons, T.—*Electrolytic Recovery of Zinc;* [Brief notes on Yoshida process tried in Japan].—U. S. Consul. Rep., Dec.29,1911; p. 1600; 200 w; 10c.

Schulze, G.—*Zum elektrochemischen Verhalten des Eisens* [Experiments with the electrolysis of iron in sulphuric acid baths, and power consumption].—Zts. f. Elektrochemie, May1,1912; p. 326; 3600 w*; 40c.

Vuigner, M.—*Sur l'électrolyse des cuivres impurs en liqueur sulfurique;* [Note on copper electrolysis in sulfuric acid; the regeneration of bath and good deposition at cathodes].—Rev. de Mét'l'gie, Jan.,1912, p. 32; 1000 w; $1.15.

———. *L'industria del recupero dello stagno dai ritagli di latta in Italia;* [The industry of tin recovery from scrap in Italy].—Rassegna Mineraria, Jan.11,1912, p. 27; 2000 w; 35c.

Abstract in English in Met. & Chemi. Engg., April,1912, p. 202; 1400 w; 35c.

———. *Progresos en los hornos de Cuba;* [Progress in lead and copper metallurgy; water-jackets; electrolytic lead refining; flue dust control].—Mex. Mng. Jnl., June,1912; p. 58; 1000 w; 10c.

———. *Treating Copper Anode Residues;* [at Montana electrolytic refineries].—Mines & Minerals, May,1912; p. 622; 1600 w*; 35c.

ELECTROPLATING

Brown, J. L. R.—*Purity a Requisite for Silver Electroplating Anodes;* [Read to Natnl. Electroplaters' Asso.; abstract].—Met. & Chemi. Engg., March, 1912; p. 184; 1600 w; 35c.

Heym, W.—*Die elektrochemische Platt-*

enamalgamierung; [Elektrolytic plate amalgamating].—Elektrochem. Zts., Jan.,1912; p. 276; 750 w; 60c.

Lecouteulx, G.—*Role du persulfate d'ammoniaque dans les bains de nickelage;* [Role of ammonium persulphate in nickel-plating solutions].—Bull. Techniq. du. Nord, Feb.-March,1912; p. 36; 500 w; 75c.

Sang, M.—*Le zingage du fer et de l'acier;* [Memoir on zinc plating of iron and steel; the various processes].—Rev. de Mét'l'gie, Jan.,1912, p. 1-31*; Feb., pp. 78-111*; March, pp. 160-186*; May, pp. 343-362*; $4.15.

Washington, L.—*New Electroplating Process;* [Italian method of depositing electrolytic copper on any insoluble surface].—U. S. Consul. Rep., June3,1912; p. 908; 750 w; 20c.

Watts, O. P.—*Electroplating on Aluminum.*—Wisconsin Engr., Jan.,1912; p. 162; 1600 w; 35c.

Wogrinz, A., and J. Kittel.—*Ueber die Bestimmung von Borsäure in Nickelbädern;* [Estimation of borates in electrolytic nickel baths].—Chemiker Ztg., Apr.18,1912; p. 433; 2500 w; 35c.

ELECTROLYSIS (MISCELLANEOUS)

Bancroft, W. D.—*Smee's Theory of Electrolytic Deposits.* — Amer. Electrochem. Soc., Trans.; read April, 1912; 5 pp.; 1800 w; 50c.

Bancroft, W. D.—*Electrical Endosmose.* —Amer. Electrochem. Soc., Trans.; read April, 1912; 5 pp.; 2000 w; 50c.

Barratt, J. O. W., and A. B. Harris.—*Elektroosmose und Konzentration der Elektrolyte;* [Electro-osmosis and concentration of the electrolyte].—Zts. f. Elektrochemie, Apr.1,1912; p. 221-225; 2500 w*; 40c.

Bennett, C. W.—*A Rotating Cathode.*—Amer. Electrochem. Soc., Trans.; read April, 1912; 7 pp.; 1900 w*; 50c.

Beutner, R.—*Potential Differences at the Junction of Immiscible Phases.*—Amer. Electrochem. Soc., Trans. for April,1912; pp. 12; 50c. Abstract in Met. & Chem. Engg., May,1912; p. 297; 500 w; 35c.

Bleeker, W. F.—*An Electrolytic Method for the Reduction of Blue Powder;* [Zinc dust].—Amer. Electrochem. Soc., Trans. for April,1912; pp. 9; 2800 w; 50c. Abstract in Mining & Engg. World, May4, p. 951; 2400 w; 10c.

Bruner, L. and E. Bekier.—*Ueber die Elektrolyse von geschmolzenem Chlorjod und Bromjod;* [Electrolysis of molten or soluble chlorine-iodine and bromine-iodine].—Zts. f. Elektrochemie, May15,1912; p. 368; 3000 w*; 45c.

Bürgin, E.—*Beiträge zur Kenntnis der Entstehung von Perboraten durch Elektrolyse;* [The production of perborates by electrolysis].—Berlin Techn. Hochschule Dissert., 1911; 58 pp*; $1 (thesis).

Carpini, C.—*Elementi di elettrochimica ad uso specialmente delle scuole professionali ed industriali;* [Elements of Electrochemistry; designed especially for professional and industrial schools].—Leghorn, Italy; 1911; pp. 316*; $1.25 (book).

Drucker, K.—*Die Chloride von Zink und Quecksilber in wässiger Lösung;* [The chlorides of zinc and of mercury, and their electrolysis in watery solutions].—Zts. f. Elektrochemie, Apr.1,1912; p. 236; 7500 w*; 40c.

Flade, Fr., and H. Koch.—*Zur Frage nach der Ursache der Passivität des Eisens;* [Investigation of the causes of passivity in iron and in iron electrodes].—Zts. f. Elektrochemie, May1,1912; p. 335; 2800 w; 40c.

Foerster, F.—*Wissenschaftliche Uebersichten; allgemeines elektrochemischen Verhalten der Metalle;* [Review of recent electrochemical literature; cathode reactions; cathode behavior of alkali metals, aluminum, silver, lead, zinc, antimony, iron, chromium, nickel, platinum; anode reactions, etc.].—Zts. f. Elektrochemie, Apr. 15,1912; p. 288-303; 15,000 w; 45c.

French, A. G.—*The French Process;* [Nelson, B. C., plant for electrolytic extraction of zinc from Slocan lead-zinc-silver ores]. —Canadn. Mng. Jnl., Jan.1,1912, p. 6; 1000 w; 25c.

Grube, G.—*Beiträge zur Passivitätstheorie;* [Current-potential tests of gold and other metals in anodic polarization in neutral and alkaline potassium ferro-ferricyanide solutions].—Zts. f. Elektrochemie. March15,1912; p. 189; 14,000 w*; 45c.

Jones, H. C.—*Electrolytic Dissociation and Solvation; Solution and Its Importance.* —Franklin Inst., Jnl., March,1912; pp. 217-238; 65c. Abstract in E. & M. J., March 30,1912; p. 653; Apr.6, p. 696; 12,000 w; 40c.

Kalischer, Prof.—*Migration of the Ions in Electrolysis;* [Translated in abstract from Elektrochem. Zts.].—Electrician, May 31,1912; p. 332; 1000 w; 35c.

Kershaw, J. B. C.—*Recent Progress in the Manufacture and Application of Hypochlorite Solutions for Bleaching and Disinfecting Purposes.*—Soc. of Chem'l Ind'y, Jnl.; Jan.31,1912; p. 54; 3200 w; 65c.

Le Blanc, M.—*Lehrbuch der Elektrochemie;* [Text-book of Electrochemistry].—Leipzig, 1911; (5th edition); 331 pp.*; $2.50 (book).

Miller, W. L.—*The Influence of Diffusion on Electromotive Force Produced in Solutions by Centrifugal Action.*—Amer. Electrochem. Soc., Trans. for April,1912; 9 pp.; 50c.

Ott, Fr.—*Die elektrolytische Reduktion der Niobsäure;* [Electrolytic reduction of niobic acid and niobates].—Zts. f. Elektrochemie, May15,1912; p. 349; 8000 w*; 40c.

Renschler, Eug.—*Zur elektrolytischen Darstellung dreiwertiger Vanadiumsalze;* [The electrolytic preparation of tri-valent vanadium salts].—Zts. f. Elektrochemie, Feb.15,1912; p. 137; 500 w; 45c.

Schneckenberg, E.—*Ueber die scheinbaren Kontaktpotential-Differenzen zwischen einem Metall und elektrolytischen Lösungen;* [The apparent differences in contact potenial between a metal and electrolytic solutions].—Elektrochem. Zts., Feb., 1912, p. 307; 500 w; 60c.

Smith, E. F.—*Electro-Analysis.*—Philadelphia, 1911 (5th edition); 332 pp.; $3 (book).

Thiel, —. *Zur Verwendung des Edison Akkumulators in der Elektroanalyse;* [Application of Edison storage battery in electro-analysis].—Zts. f. angew. Chemie, Jan. 12,1912; p. 56-59; 75c.

Thompson M. de Kay.—*Applied Electrochemistry.*—New York, 1911; pp. 12-329*; $2.10 (book).

Ges. für Chemische Industrie, Basel.—*Apparat zur Elektrolyse geschmolzener Alkali-chloride;* [Apparatus for electrolysis of alkaline chlorides; Engl. Pat. No. 18,300; 1910].—Kali, Jan.15,1912; p. 43; 750 w*; 45c.

ELECTRO-CYANIDING

See under "Cyaniding."

ELECTROSIDERURGY

See under "Iron & Steels," chapter 4.

ELECTRIC FURNACES (FOR NON-FERROUS METALS)

For aluminum see under "Electrolytic Metal Refining." See also under Aluminum.

Borchers, W.—*Ueber die Verarbeitung von sulfidischen oder oxydischen Zinkerzen im elektrischen Ofen;* [Metallurgy of zinc sulphide and oxide ores in the electric furnace].—Metallurgie, March8,1912; p. 153; 1000 w; 35c.

Conklin, H. R.—*Electric Furnace at Lluvia de Oro;* [for melting cyanide precipitates; Chihuahua, Mex.].—E. & M. J., June 15,1912; p. 1189; 4000 w*; 25c.

Eulenstein, Fr. *Untersuchungen über den Einfluss von Lösungen von Eisen in Schwefeleisen auf Zinkblende;* [Bearing of solubility of iron in pyrite on the question of electric smelting of zinc blende].—Metallurgie, March8,1912; p. 154-158*; 3000 w*: 45c.

Fink, C. G.—*Vacuum Furnace Metallurgy;* [Tests on some complex Canadian cobalt-silver-nickel ores, and production of antimony from stibnite; read to Amer. Electrochemi. Soc., April,1912; abstract].—Met. & Cheml. Engg., May,1912; p. 296; 1000 w; 35c.

FitzGerald, F. A. J.—*Refractories;* [for electric furnaces; investigation of alundum, silicon carbide, magnesia, lime].—Met. & Cheml. Engg., March,1912; p. 129; 4000 w; 35c.

Italian abstract on crystalon (silicon carbide); in Rassegna Mineraria, April11, p. 213; 1600 w; 40c.

FitzGerald, F. A. J.—*Experiments on Heat Insulation.*—Amer. Electrochemi. Soc., Trans. for April,1912; 7 pp.; 1200 w*; 50c.

Abstract in Cheml. Engr., April,1912; p. 158; 1500 w; 35c. Also in Canadian Engr., May2, 1912; p. 618; 1500 w*; 25c. Also in Met. & Cheml. Engg., May, p. 286; 500 w*; 35c.

FitzGerald, F. A. J.—*A New Electric Resistance Furnace;* [For Imbert zinc smelting process; read to Amer. Electrochemi. Soc.; abstract].—Electrician, Jan.19,1912; p. 601; 2500 w; 35c.

Ganet, L.—*La fabrication du zinc au four électrique;* [Zinc metallurgy in the electric furnace, especially in Scandinavia].—Jnl. du Four Electriq., May1, p. 193; 2000 w; 35c. Also in Echo d. Mines, May 9,1912; p. 571; 2000 w; 35c.

Goecke, O.—*Der elektrische Vakuumofen und seine Verwendung;* [The electric vacuum furnace and its application].—Danzig Techn. Hochschule dissert., 1911; pp. —; $1 (Thesis).

French abstract in Rev. de Mét'l'gie, June,1912; p. 298; 1200 w*; $1.15.

Greenwood, H. C.—*Ueber die Siedepunkte von Metallen;* [Tests of the volatilization temperatures of metals in the electric furnace; non-carbide forming metals, carbon-alloy group, and effect of varying pressures].—Zts. f. Elektrochemie, May1,1912; p. 319; 4500 w*; 40c.

Harbord, F. W.—*Zinc Smelting in Electric Furnaces;* [Report on de Laval process at Trollhättan, Sweden, and Sarpsborg, Norway; abstract].—Canadn. Engr., Feb. 22,1912; p. 330; 2000 w; 25c.

Härdén, J.—*Electric Smelting and Reduction of Ore in England;* [Tin, wolfram and ferro-alloys, by Electric Furnaces & Smelters, Ltd.].—Electrician, Dec.29,1911, p. 467; 2500 w; 30c. Abstract in Mining & Engg. World, March16,1912; p. 604; 1500 w; 10c. Also in U. S. Consul, Rep., March 23, p. 1192; 1000 w; 20c.

Härdén, J.—*Electric Tin Smelting; A Commercial Scale Trial.*—Met. & Cheml. Engg., Sept.,1911, p. 453; 4800 w*; 35c.

Reprinted in Electrician (London), Sept. 29, p. 964; 35c. Also in Iron & Coal Trades Rev., Oct.6, p. 583; 30c. Also in Australian Mng. Standd., Dec.7, p. 577; Dec.14, p. 603; 50c.

In German in E. T. Z., Vol. 33, p. 237; 2500 w*; 45c. Also in Zts. f. Elektrochemie, June1, p. 443; 2500 w; 45c.

Harker, J. A.—*Very High Temperatures* [In electric furnaces; read to Roy. Instn.; abstract].—Engnrg., Feb.16,1912; p. 225; 1600 w*; 35c.

Hering, C.—*Some Engineering Features of Electric Furnaces;* [Economic comparisons with fuel heat].—Engrs. Club. of Phila., Proc., Oct.,1911, p. 299-312*; 65c.

Abstract in Engg. News, Jan.11,1912, p. 56; 5000 w*; 25c. Also in Engg. Mag., Feb., p. 784-792; 6000 w*; 35c. Also in Canadian Engr., Apr.11, p. 528; 2100 w; 25c.

Hering, Carl.—*The Thermal Insulation of Furnace Walls;* [In electric furnaces].—Met. & Cheml. Engg., Feb.,1912, p. 97; 6000 w*; 35c.

Johnson, W. Mc. A.—*Johnson Continuous Electric Zinc Furnace.*—Iron Age, May2, 1912; p. 1082; 1600 w*; 30c.

Johnson, C. F.—*The Electric Zinc-Smelting Furnace.*—Met. & Cheml. Engg., May, 1912; p. 281; 2100 w*; 35c.

Ruthenburg, M.—*Electric Smelting Furnaces and Their Application;* [in copper, nickel-cobalt, tin ores, etc.; read to Amer. Electrochemi. Soc., 1911; abstract].—Electrician, June 9,1911, p. 336; 1600 w; 35c. Also in Australian Mng. Standd., July 20, 1911, p. 70; 1500 w; 35c. Also in Spanish in Mex. Mng. Jnl., Jan.,1912, p. 57; 1700 w; 25c.

Salagnac, —. *Le four électrique dans les petites fonderies de métaux;* [Some French electric smelters for scrap and waste metal].—Rev. pratiq. d. Ind's Métallgq., March, 1912; p. 1; 1200 w*; 40c.

Snider, F. T.—*The Reliability of Electric Furnaces for Commercial Work;* [abstract; from Amer. Electrochemi. Soc.].—Electrician, Dec.15,1911, p. 388; 1500 w; 35c.

Thomas, F.—*Elektrischer Widerstandsofen für beliebige Badlängen;* [Resistance oven for zinc smelting, with regulatable time duration of bath].—Metallurgie, March 8,1912; p. 158; 2000 w*; 45c.

Turnbull, R.—*Furnace Electrodes Practically Considered.*—Amer. Electrochemi. Soc., Trans.; read April, 1912; 5 pp.; 1800 w; 50c.

Abstract in Cheml. Engr., April,1912; p. 168; 2000 w; 35c. Also in Canadian Engr., May2, p. 616; 2000 w; 30c. Also in Met. & Cheml. Engg., May, p. 289; 800 w; 35c. Also in Iron & Coal Trades Rev., May24, p. 815; 1000 w; 35c. Also in Mining & Engg. World, May25, p. 1087; 1200 w; 10c. Engg., April,1912, p. 202; 1400 w; 35c. Also in Iron & Coal Trades Rev., Apr.12, p. 564; 1400 w; 35c.

Unger, M.—*The Action of Electro-Mechanical Forces on the Bath of Induction Furnaces.*—Met. & Cheml. Engg., May, 1912; p. 263; 1800 w*; 35c.

———. *An Electric Furnace for Non-Ferrous Metals;* [Tin dross, etc.; Pitts-

burgh arc-resistance combination type].—Iron Trade Rev., Feb.1,1912, p. 279; 1200 w*; 20c.

———. *Electric Zinc Smelting Furnace;* [Imbert process and patents].—Mng. & Engg. Rev., March,1912; p. 254; 1400 w; 35c.

———. *Französisches Verfahren zur Zinkgewinnung;* [New French electric furnace for zinc recovery from blende].—Centralb. d. Hütten & Walzwerke, March 5, 1912; p. 118; 1000 w*; 35c.

———. *La fusion au four électrique des déchets de métaux;* [The smelting of scrap metal in the electric furnace].—Jnl. du Four Electriq., May15,1912; p. 223; 1000 w; 35c.

———. *Recent Experiments in the Electrometallurgy of Tin in France.*—Mining & Engg. World, Apr.20,1912; p. 869; 500 w; 10c.

———. *Réglage automatique des fours électriques;* [Automatic regulation of electric furnaces having one or more movable electrodes].—Jnl. du Four Electriq., Jan.1, 1912; p. 8; 2500 w*; 35c.

———. *Ueber einen neuen elektrischen Widerstandsofen mit Heizwiderstand aus unedlen Metallen;* [New resistance furnace with base-metal electrodes].—Chemiker Ztg., Jan.25,1912, p. 96; 500 w*; 30c.

———. *Zinc Smelting at Trollhattan.*—E. & M. J., Feb.10,1912; p. 314; 2100 w; 25c.

———. *Ueber ein neuen elektrischen Ofen zum Schmelzen von Gekrätze, Messing, Bronze, metallischen Abfällen, Silber und anderen Metallen, äusser Eisen und Legierungen;* [Electric tilting furnace for smelting non-ferrous scrap metal].—Giesserei Ztg., Apr.1,1912; p. 223; 2000 w*; 35c.

ELECTRIC FURNACES (FOR NON-METALS; MISCELLANEOUS)

Acheson, E. G.—*Deflocculation.*—See under Graphite, Chapter 7.

Benfey, G.—*Herstellung Feuerfester Erzeugnisse;* [The manufacture of refractory products].—Hannover, 1912; pp. —; $1.50 (book).

Benner, R. C.—*An Electric Laboratory Furnace.*—Jnl. of Ind'l & Engg. Chem'y, Jan.,1912; p. 43; 3000 w*; 65c. Abstract in Mining & Engg. World, May18, p. 1051; 2100 w*; 10c.

Berthelot, D.—*Fusione e lavoro del quarzo;* [The smelting and working of quartz glass; and bearing on the application of ultra-violet rays; Italian abstract from Soc. d. Ingrs. Civils, France, Bull., Dec., 1911].—Rassegna Mineraria, March21,1912; p. 173; 1800 w; 35c.

Billon-Daguerre, —. *La fusion de quartz pur au four électrique;* [The smelting of quartz in the electric furnace; read to Acad. d. Sci., Paris].—Jnl. du Four Electriq., March15,1912; p. 124; 500 w; 35c.

Codesido, B. J.—*El ácido nítrico, su preparación electro-quimica y sus aplicaciones.*—Peru Direccion Fomento, Bol., Sept.,1911; pp. 41-52; 50c.

Courtagne, G.—*Notes bibliographiques sur l'azoture d'aluminium;* [Historical development and bibliography of the aluminum nitride industry].—Phosphate, Jan.8, 1912, p. 39-41; Jan.22, p. 83-84; Jan.29, p. 103; 5500 w; 65c.

Crossley, A. W.—*Synthetic Ammonia and Nitric Acid from the Atmosphere;* [Lectures before Roy. Instn., April,1912].—Engnrg., May3,1912; p. 599; 1500 w; 35c.

Dittler, E.—*Zweck und Ergebnisse der Mineralsynthese;* [Artificial production of minerals, methods, aims and results, especially as regards mineral genesis].—Naturw. Umschau, March,1912; p. 21; 5000 w*; 35c.

Doermer, L.—*Künstliche synthetische Edelsteine;* [The artificial gem industry in Germany; read to Naturwissensch. Ver. Hamburg; abstract].—Chemiker Ztg., Feb. 20,1912; p. 200; 1000 w; 30c.

de Florin, H. Büeler.—*Verfahren zum Erschmelzen von Quarz;* [Process for smelting of quartz].—Elektrochem. Zts., Jan., 1912; p. 271; 1000 w*; 60c.

Franklin, M. W.—*Ozone; Its Properties and Commercial Production.*—Amer. Inst. Electr. Engrs., Proc.; May,1912; pp. 597-607*; $1.15.

Hering, C.—*Electrochemical and Electrothermal Calculations;* [Read to Amer. Electrochem. Soc., April,1912; abstract].—Mining & Engg. World, Apr.13,1912; p. 815; 1800 w; 10c.

Hering, C.—*Effects of the Variations of Thermal Resistivities with the Temperature.*—Amer. Electrochem. Soc., Trans. for April,1912; 14 pp.; 50c. Abstract in Met. & Chem. Engg., May, p. 286; 1000 w; 35c.

Hering, C.—*Uniformity and Simplicity in Electrochemical and Electrothermal Calculations.*—Amer. Electrochem. Soc., Trans. for April,1912; 2000 w; 50c.

Howell, S. M.—*Crystallization of Carbon by Artificial Means.*—Met. & Chem. Engg., April,1912; p. 197; 2500 w*; 35c.

von Kéler, H.—*Die wichtigsten Fortschritte auf dem Gebiete der anorganischen Grossindustrie im Jahre* 1911; [The more important advances in the chemical industries in 1911; (2): nitric acid, nitrates and nitrides, ammonia and ammonium compounds, cyanicides, carbides, silicides, etc.].—Zts. fr. angew. Chemie, March15,1912; p. 518; 5000 w*; 50c.

Norton, T. H.—*Electrochemistry and Metallurgy in Norway;* [Carbide, cyanamide, air nitrates, sodium, aluminum, ferro-silicon, copper-nickel refining, electrosiderurgy].—Mining & Engg. World, Feb.17,1912; p. 407; 2000 w; 10c.

Pitaval, R.—*Les exportations françaises de produits électrométallurgiques;* [French exports of electrometallurgic products; aluminum ferro-silicon, carbides, chlorates and chlorides].—Jnl. du Four Electriq., Feb.15,1912, p. 73; 1000 w; 35c.

Pitaval, R.—*Revue des industries électrochimiques et électro-métallurgiques;* [Progress in electrochemistry and electrometallurgical industries, 1911; aluminum, calcium carbide, ferro-alloys, nitrogen].—Jnl. du Four Electriq., Jan.1,1912; p. 1; 2000 w; 35c. Also in Soc. Amicale Ecole Douai, Bull., March10, p. 154-160; March25, p. 168-; 50c.

Poussin, L. de la V.—*Le saltpêtre et chutes d'eau en Norvège;* [The nitrate electrochemical industry of Norway; read to Acad. d. Sciences etc. de Rouen; abstract].—Phosphate, May20,1912; p. 419; 500 w; 35c.

Randolph, C. P.—*The Thermal Resistance of Insulating Materials.*—Amer. Electrochem. Soc., Trans. for April,1912; 8 pp.; 50c.

Saunders, L. E.—*Temperature Measurements on Silicon-Carbide Furnaces;* [Read to Amer. Electrochem. Soc., April,1912; brief abstract].—Met. & Chem. Engg., May,1912; p. 287; 1000 w*; 35c.

Schildbach, R.—*Ueber die elektrochemische Verhalten des Kobalts;* [The electrochemical* behavior of cobalt].—Dresden Techn. Hochschule, 1911, dissert; pp. —; (thesis).

Scott, E. K.—*The Manufacture of Nitrates from the Atmosphere.*—Roy. Soc. of Arts, May17, 1912; p. 645-667; 15,000 w*; 35c.

Scott, E. K.—*Electricity in Connection with Explosives;* [In manufacture and firing; read to Asso. of Mng. Electr. Engrs.; abstract].—Iron & Coal Trades Rev., Nov.3, 1911; p. 736; 6000 w*; 30c; (Discussion), Jan.26,1912, p. 132; 3000 w; 30c.

Scott-Hansen, A.—*Hydro-Electric Plants in Norway and Their Application to Electrochemical Industries.*—Faraday Soc., Trans., Nov.,1911, pp. 78-93*; $4.00.

Sell, H.—*Ueber die Umwandlung von Kalkstickstoff in Cyanid;* [The transformation of calcium nitrate into cyanide].—Berlin Techn. Hochschule dissert., 1911; pp. —; (thesis).

Spiel, H.—*Ueber die Bildung von Stickoxyden bei der stillen elektrischen Entladung im Siemensrohr;* [The manufacture of nitrogen oxides by continuous electric discharge in the Siemens tube].—Vienna, 1911; 55 pp*; $1.00 (book).

Tausent, M.—*Vergleichende Versuche über die Oxydation des Stickstoffes in der Hochspannungsflamme;* [The oxidation of nitrogen in the high-tension flame].—Zts. f. Elektrochemie, May1,1912; p. 314; 4500 w*; 40c.

Ubbelohde, L.—*Elektrische Laboratoriumsöfen mit Wicklung aus unedlem Metall;* [Laboratory electro-furnaces with base-metal lining].—Zts. f. Elektrochemie, Dec.1,1911, p. 1002; 1200 w; 40c.

Discussion in Chemiker Ztg., Feb.10, 1912, p. 167; 500 w; 25c.

———. *Electrochemistry and Chemistry in* 1911.—Met. & Cheml. Engr., Jan.,1912; p. 9; 1000 w; 35c.

———. *La fabrication industrielle de l'azote pur;* [Industrial manufacture of pure nitrogen; from Houille Blanche].—Rev. Indl. du Centre, Jan.13,1912, p. 7; 1000 w; 35c.

———. *Le officine elettrochimiche Dottor Rossi a Legnano;* [The Dr. Rossi electrochemical works for preparation of potassium chlorate and of atmospheric nitric acid].—Rassegna Mineraria, Feb.1,1912; p. 64; 2000 w; 45c.

———. *Les propriétés du silico-calcium;* [The properties of silico-calcium and use in desulphurizing and dephosphorizing of steel].—Jnl. du Four Electriq., Apr.15,1912; p. 175; 350 w; 35c.

———. *Nitrates from the Air;* [Plant of Southern Electrochemical Co., at Nitrolee, S. Carr, for lime nitrate].—Manfrrs. Record, Feb.8,1912; p. 47; 750 w*; 25c. Also in Amer. Fertilizer, Feb.24,1912; p. 45; 750 w*; 25c.

———. *The Calcium Carbide Industry.*—U. S. Consul. Rep., Feb.6,1912; p. 568; 750 w; 20c.

Thermic Metallurgy: Roasters, Furnaces, Smelters, Foundries

PRECIOUS METAL TREATMENT

Austin, L. S.—*Silver-Lead Smelting.*—M. & S. P., Jan.6,1912, p. 20; 1500 w; 35c.

Benner, R. C., and M. L. Hartmann.—*The Early History of Cupellation.*—M. & S. P., Apr.6,1912; p. 501; 1800 w; 20c.

von Bernewitz, M.—*Treatment of Matte from Mill Clean-Up;* [At Asso. Northern Blocks, W. Australia].—M. & S. P., March 2,1912; p. 343; 1000 w; 15c.

Bowen, M.—*Some Points in Cupola Design and Management.*—Castings, April, 1912; p. 5; 1200 w*; 30c.

Brooks, C. J.—*Cupellation of Gold Precipitate;* [at Bau. Borneo].—Mng. Mag., March,1912; p. 193; 2600 w*; 35c. Abstract in Mining & Engg. World, July6, 1912; p. 18; 1000 w; 10c.

Crookes, Sir Wm.—*The Volatility of Metals of the Platinum Group;* [Read to Roy. Soc. in March,1912; brief abstract].—Met. & Cheml. Engg., May,1912; p. 302; 500 w; 35c.

Darrow, W. E.—*Treatment of Matte from Mill Clean Up;* [At Amador City, Cal.].—M. & S. P., Apr.6.1912; p. 508; 500 w; 20c.

Friedrich, K.—*Einiges über das Saigern;* [The liquation process from the theoretic standpoint].—Inst. f. Metallographie, etc., an Freiberg; Mittlngn. f. 1910; pp. 20-29*; $3.20.

Friedrich, K., and A. Leroux.—(1 *Silber und Schwefelsilber;* (2) *Blei and Silber;* (3) *Kupfer, Silber und Blei;* [Alloys and smelter compounds of (1) silver and silver-sulphides, (2) lead-silver, (3) copper-silver-lead].—Inst. f. Metallographie, etc., an Freiberg, Mittlngn. f. 1910; (1) pp. 47-56*; (2) pp. 57-65*; (3) pp. 117-138*; $3.20.

Hubbard, J. D.—*A Convenient Slag Furnace;* [Reduction of slags in melting cyanide precipitate at Oriental Consol. Mng. Co., plant, Tarcol, Korea].—M. & S. P., Apr.27, 1912; p. 597; 1000 w*; 20c.

Irvin, D. F.—*An Electrical Drier for Zinc Precipitate* [from cyanide; at El Tigre plant].—M. & S. P., March16,1912; p. 405; 500 w*; 20c.

Johnson, E. H.—*Clean-Up and Smelting.*—See Caldecott's "Rand Metallurgic Practice," under Transvaal.

Kern, E. F., and A. A. Heimrod.—*Volatilization of Gold and Silver from Their Copper Alloys.*—Columbia School of Mines Quar'ly, Nov.,1911, pp. 34-65*; 65c.

Neilly, B.—*Refining Silver Bullion from Cobalt, Ont., Ores;* [U. S. Pat. No. 1,004,-676; Oct.3,1911].—Mining & Engg. World, Feb.3,1912; p. 296; 250 w; 10c.

Ossa, I. D.—*Direct Smelting of Silver-Copper Ores;* [Cristobal Colon, Chile; from Soc. Nac. Mineria Chile, Bol.; and Mng. Jnl.].—Mex. Mng. Jnl., Jan.,1912, p. 36; 1000 w; 25c.

Poole, W.—*Treatment of Broken Hill Ores;* [Milling and metallurgy of lead-zinc ore carrying gold and silver; I: Grinding and concentration; II: Various sintering processes; III: Port Pirie blast-furnace; IV: Refining base bullion; V: Zinc crusts and drosses; read to Sydney Univ. Engg. Soc.; abstract].—Mines & Minerals; (1) Nov.,1911; p. 227; 7000 w*; (2) Dec., p. 315; 5000 w*; (3) Jan.,1912; p. 381; 3600 w*; (4) Feb., p. 423; 5000 w*; (5) March, p. 498; 3000 w*; $1.45.

Rigg, E.—*The Melting of Bullion in Electric Gas-Fired Furnaces;* [Report of Sup't. Operatg. Dept. of British Mint; Crown Doc. No. 5862].—London, 1911.

"Inquirer."—*Retorting Cyanide Precipitates* [at Tonopah, Nev.].—E. & M. J., Dec. 2,1911, p. 1070; 500 w; 25c.

———. *Cost of Melting Gold Precipitate* [with Faber du Faur tilting furnace, coke fuel].—E. & M. J., Apr.27,1912; p. 837; 300 w; 25c.

———. *Melting at the British Mint.*—E. & M. J., Feb.24,1912; p. 399; 600 w; 25c.

———. *Progress of the Witwatersrand Co-Operative Smelting Works;* [for smelting slags, pots, liners, black sands and gold works refuse].—S. Afr. Mng. Jnl., March30, 1912; p. 142; 750 w*; 35c.

———. *The Smelting of Lead for Bullion;* [Magdalena district, Oaxaca].—Los Angeles Mng. Rev., Jan.13,1912; p. 8; 1200 w; 20c.

BASE METALS; MISCELLANEOUS

For iron and steel see Chapter 4.

Assaeievf, V. P.—*Production of Copper in the Kyshtim District;* [Abstract from "Gornyi Journal"].—Mng. Jnl., May4,1912; p. 438; 1200 w; 35c. Also in M. & S. P., June29, p. 891; 1000 w; 20c.

Bassett, W. H.—*Zinc Losses;* [Symposium on conservation in zinc smelting].—Jnl. of Ind'l & Engg. Chem'y, March,1912; p. 164; 4000 w; 65c.

Bretherton, S. E.—*Problems in Modern Copper Smelting.*—M. & S. P., Feb.10,1912; p. 243; 3800 w*; 20c.
Spanish abstract in Mex. Mng. Jnl., April,1912; p. 55; 2000 w; 25c.

Browne, D. H.—*Recent Improvements and Additions to the Smelting Plant of the Canadian Copper Co.*—Canadian Mng. Inst., Bull. 18, Feb.,1912; p. 33; 2500 w; $1.20.
Reprinted in Mining & Engg. World, March16, p. 597; 10c.

Buskett, E. W.—*Process of Manufacturing Sublimed White Lead.*—Mining & Engg. World, Feb.17,1912; p. 393; 4500 w*; 10c.

Butler, B. S.—*The Production of Copper in* 1910; [Mine, smelter and refinery production and review in U. S.].—U. S. Geol. Survey, Mineral Resources f. 1910; 1911; 70 pp; 10c.

Cameron, W. H.—*The Prevention of Accidents in Foundries;* [Read to Pittsburgh Foundrym. Asso., April1,1912; abstract].—Iron Age, Apr.4,1912; p. 883; 5000 w*; 30c.
Also in Iron Trade Rev., Apr.11, p. 806; 5000 w; 20c. Also in Castings, April, p. 9; 4200 w; 25c.

Carpenter, H. C. H.— *Further Experiments on the Critical Point at 470° C. in the Copper-Zinc Alloys;* [Discussion before Instn. of Metals].—Engnrg., Jan.19,1912; p. 89; Feb.23, p. 265; 7000 w*; 45c.

Clerc, F. L.—*The Utilization of the Zinc Carbonates and Silicates of Leadville, Colo.*—Colo. Scient. Soc., Proc., Sept.,1911, pp. 85-98; 65c. Abstract in Mng. Sci., Feb.22, p. 187; 2200 w*; 20c.

Danneberg, E.—*Neuzeitliche Lüftungs-, Entstaubungs- und Luftheizungs-Anlagen in Giessereibetrieben;* [Newer developments in ventilation, dust-freeing and warming of foundry works; read to Ver. Deu. Giesserelfachleute, Berlin section].—Geisserei Ztg., Jan.1,1912; p. 1; 5500 w*; 45c.

Davidson, R. N.—*Electrical Equipment of a Nevada Smelter;* [Mason Valley Mines Co. plant at Thompson].—Jnl. of El'y Power & Gas, Apr.20,1912; p. 349; 1000 w*; 35c.

Diener, F.—*Der Pfingstausflug nach Sachsen;* [Excursion of the Bochum (Pfingsten) Mining School to the Freiberg mines and smelters, Saxony].—Bergbau, Feb.22,1912, p. 105; 1500 w; 35c.

Dinsmore, C. A.—*The New Calumet & Arizona Smelter.*—El Paso Mng. Jnl., Feb., 1912; p. 18; 1400 w; 35c.

Dinsmore, Chas. A.—*Arizona Copper Co.'s New Smeltery.*—El Paso Mng. Jnl., Jan., 1911 [1912]; p. 17; 1300 w; 35c.

Dinsmore, Chas. A.—*The Needles Smelter;* [U. S. Smeltg. Refg. & Mng. Co., lead-copper plant at Needles, Cal.].—El Paso Mng. Jnl., Dec.,1911, p. 12; 1300 w*; 35c. Also in Mining & Engg. World, Dec.30, p. 1324*; 1000 w*; 10c.

Edwards, G. E.—*The Metallization of Low-Grade Iron Ores;* ["Step" process of J. T. Jones for reducing iron ore at Iron Mt., Mich., without smelting gangue].—Mining & Engg. World, March9,1912; p. 553; 3000 w; 10c.
Also discussed by J. T. Jones in Iron Age, Dec.14,1911; p. 1305; 1100 w; 30c. Also in E. & M. J., Feb.24,1912; p. 400; 1500 w; 25c.

Emrich, H. H.—*Electrolytic Copper Refining;* [Also reverberatory refining].—Amer. Inst. Mng. Engrs., Trans; read Feb., 1912; pp. ——; $1.15.
Short abstract in Met. & Cheml. Engg., March, p. 171; 500 w; 35c.

French, A. T.—*Quick Combination Methods in Smelter Assays.*—Instn. of Mng. & Met'gy, Bull. 89, Feb.,1912; pp. 1-18; 50c. Abstract in M. & S. P., March16, p. 408; 2200 w; 20c. Also in Mining & Engg. World, May25, p. 1098; 2500 w; 10c. Also in E. & M. J., June8, p. 1143; 5000 w; 25c.
Abstract in Spanish in Mex. Mng. Jnl., Aug.,1912; p. 55; 4400 w; 25c.

Friedrich, K. A., and A. Leroux.—(1) *Kupfer und Arsen;* (2 *Blei and Arsen;* (3) *Silber und Arsen;* (4) *Zink und Arsen;* (5) *Eisen und Arsen;* (6) *Nickel und Arsen;* [The arsenides formed in smelting copper, lead, silver, zinc, iron and nickel].—Inst. f. Metallographie, etc., Freiberg; Mittlngn. f. 1910; (1) pp. 1-17; (2) pp. 30-40; (3) pp. 41-43; (5) pp. 66-67; (5) pp. 96-102; (6 pp. 103-116; $3.20.

Friedrich, K., and A. Leroux.—*Blei und Schwefel;* [The lead sulphides in nature and in thermic metallurgy].—Inst. f. Metallographie, etc., Freiberg, Mittlngn. f. 1910; pp. 17-19; $3.20.

Gaehr, D.—*Overhead Trolley Systems for the Foundry;* [Read to Amer. Foundrymn. Asso.; abstract].—Castings, Feb.,1912; p. 145; 5000 w*; 25c.

Goldschmidt, K., and Jos. Webber.—*The Goldschmidt Process of Detinning Scrap.*—Mining & Engg. World, Dec.23,1911, p. 1267; 1800 w*; 10c.

Gowland, W.—*Copper and Its Alloys in Early Times;* [Presidential address, Instn. of Metals; abstract].—Engg., Jan.19,1912; p. 87; 1000 w; 30c.

Greenwood, H. C.—*The Boiling Points of Metals.*—Faraday Soc., Trans., Nov.,1911, p. 145-157*; $4.00.
In German in Zts. f. Elektrochemie, May 1,1912; p. 319; 4500 w*; 40c.

Guillet, L.—*Metodos y progresos metalurgicos del cobre;* [Progress in smelting and electrolysis of copper; Spanish abstract of paper in Soc. d. Ingrs. Civ. France, Memoires, 1911].—Mex. Mng. Jnl., Jan.,1912, p. 53; 4400 w; 25c.

Hall, R. G.—*Zinc Ore and Zinc Smelting;* [Reviews smelting capacity and ore-prices *in* 1911].—M. & S. P., Jan.6,1912, p. 8; 1000 w; 35c.

Hedley, R. H.—*Work of the Cons. Mining & Smelting Co. of Canada, Ltd.;* [Trail silver-lead-zinc and copper mining and smelting; and outlook for iron; read to Canadian Mng. Inst., Toronto, March,1912].—Canadian Mng. Jnl., Apr.1,1912; p. 222; 1800 w; 25c. Also abstracted in E. & M. J., June1, p. 1096; 1100 w; 25c.

Heike, W.—*Zinnhaltiger Bleiglanz aus einem Eisenhochofen und das System*

Schwefelblei und Schwefelzinn; [Notes on some tin-bearing lead sulphides occurring in a Silesian iron slag, and remarks on the combination of tin and lead sulphides].—Metallurgie, May2,1912; p. 313-319*; 50c.

Hempel, —. *Vorschläge zur Verbesserung der Treppenrostfeuerungen;* [Improvements in step-grate firing].—Kali Erz & Kohle, Feb.15,1912; p. 160; 800 w*; 35c.

Holloway, G. T.—*Notes on the Valuation of Ores and Minerals, and on Metallurgical Calculations.*—Instn. of Mg. & Met'l'gy, Bull. 90; March,1912; pp. 16; chart; 50c.

Hommel, W.—*Origin of Zinc Smelting;* [In China and India].—E. & M. J., June15, 1912; p. 1185; 4000 w*; 25c.

Hore, R. E.—*The Copper Mining Industry of Michigan;* [Crushing and concentrating; smelting and refining].—Mining & Engg. World, Apr.6,1912; p. 763; 5500 w*; 10c.

Ingalls, W. R.—*The Metallurgy of Zinc;* [Progress in 1911].—E. & M. J., Jan.6,1912, p. 41; 4500 w; 25c.

Jacobs, E.—*Metallurgy in British Columbia;* [French zinc process; stamp milling and cyaniding; copper smelting].—Met. & Cheml. Engg., Feb.,1912, p. 112; 1800 w; 35c.

Japing, Ed.—*Kupfer und Messing, etc.;* [Copper and brass and the other technically important copper alloys, their production, properties and preparation for metal ware].—Vienna, 1911 (2d edition, by H. Krause); 215 pp.; 49 figs.; $1.25; (book).

Johns, B. S.—*Henry Johns, an Early American Copper Refiner;* [Reviews history of first smelting of Lake Superior copper in 1847].—E. & M. J., June15,1912; p. 1183; 1200 w; 25c.

Johnson, A. R. and W. R. Woolrich.—*On the Nature of Zinc Cementizing (Sherardizing).*—Amer. Electrocheml. Soc., Trans.; read April,1912; 11 pp.*; 2000 w*; 50c.

Krantz, Fr.—*Die Entwickelung der oberschlesischen Zinkindustrie in technischer, wirtschaftlicher und gesundheitlicher Hinsicht;* [Development of the zinc industry in Upper Silesia from the technical, industrial and sanitary points of view].—Kattowitz, 1911; 96 pp*; $2.50; (book).

Kühl, H.—*Die Geschichte der Bronzegiesserei der alten Welt;* [History of bronze casting in ancient times].—Giesserei Ztg., Feb.15,1912, p. 119; March1, p. —; 2500 w; 60c.

Langford, F.—*Smelter Building in Chile;* [Labor and political conditions affecting Braden smelter].—M. & S. P., Apr.27,1912; p. 599; 1000 w*; 20c.

Lauck, W. J.—*Labor Conditions in Arizona Smelters.*—M. & S. P., Feb.3,1912; p. 212; 750 w; 20c.

Lauck, W. J.—*Employes of the Smelting and Refining Industries;* [Nationality of laborers in western works].—Mining & Engg. World, Dec.30,1911, p. 1327; 2200 w; 10c.

Lee, G. M.—*The Granby Smelter.*—Met. & Cheml. Engg., March,1912, p. 147; 4000 w*; 35c.

Lelong, A., and E. Mairy.—*Traité Pratique de Fonderie;* [Manual of Foundry Practice; iron, malleable iron, steel, copper and alloys].—Paris, 1912; 2 volumes; pp. 659; 512; (book).

Liddell, D. M.—*The Treatment of Metallic Junk;* [Copper, lead, zinc, tin, precious metals].—E. & M. J., March2,1912; p. 452; 4000 w*; 25c.

Liggett, T.—*The Sherardizing Process; Galvanizing by the Formation of Zinc-Iron Alloy;* [from "The Foundry," abstract].—Engg. Mag., May,1912; p. 277; 1500 w; 35c.

Martell, P.—*Das Giesserei- und Hüttenwesen im Königreich Sachsen;* [Development of smelting and foundries in Saxony].—Giesserei Ztg., March1,1912; p. 157; March15, p. 89; 3000 w; 50c.

Martin, Al. H.—*Mason Valley Mines and Smelting Works, Nevada.*—Mines & Methods, April,1912; p. 447; 1700 w*; 25c.

Nagel, O.—*Bemerkungen über die Lithoponefabrikation und ihre mechanische Vervollkommung;* [The process of lithopone manufacture and mechanical up-to-dateness].—Zts. f. angew. Chemie, March29, 1912; p. 617; 1800 w*; 50c.

Narteil, V.—*Alliages et Fonderie de Bronze;* [Bronze alloys and foundry practice].—Paris, 1912; 190 pp; 127 figs; $2.50 (book).

Neumann, —. *Technische Fortschritte im Metallhättenwesen;* [Progress in the metallurgy of the various metals].—Zts. f. angew. Chemie, Feb.2,1912; pp. 193-203; 75c.

Nicolescu, C.—*Ueber Schmelzen von Kupferoxydul mit Kieselsäure;* [Tests of smelting of copper oxide, Cu_2O, with silica].—Metallurgie, Feb.8,1912; p. 92-99*; 50c.

Northrup, E. F.—*Temperature and the Properties of Matter.*—Met. & Cheml. Engg., June,1912; p. 352; 5000 w*; 35c.

Perczel, A.—*Ueber Schmelzpunktbestimmung hochschmelzender Metalle;* [Determination of the melting point of refractory metals; tantalum, tungsten, palladium, etc.; read to Ungar. Naturw. Ver., chemisch-mineralog. section; Feb., 1912; brief mention in] Chemiker Ztg., May28,1912; p. 596; 100 w; 35c.

von Pirani, M. and A. R. Meyer.—*Ueber den Schmelzpunkt des Tantals;* [The melting point of tantalum; from Deu. Physikalischen Ges. Verhandl., Vol. 13, No. 14, 1911].—Brunswick, 1911; pp. —; $1.

Pulsifer, H. B.—*The Metallurgy of Lead.*—Salt Lake Mng. Rev., Dec.30,1911; p. 15; Jan.15, p. 16; Jan.30, p. 17; Feb.15, p. 14; Feb.29, p. 15; March15, p. 14; March31, p. 16; Apr.15, p. 15; Apr.30, p. 24; May 15, p. 18; May30, p. 15; June15, p. 15; July15, p. 25; 28,000 w*; $1.95.

Read, T. T.—*Metallurgy of Copper During* 1911.—M. & S. P., Jan.6,1912, p. 26; 4000 w; 35c.

Reid, —. *Notes on the "Best Selected" Process in the Metallurgy of Copper, and an Application of the Bessemer Converter Thereto.*—Instn. of Civ. Engrs., Proc.; Vol. 185; 1911; pp. 379-381.

Richards, J. W.—*The Japan Excursion of the American Institute of Mining Engineers;* [Shisaka and Nikko copper smelters].—Met. & Cheml. Engg., Jan.,1912, p. 15; 5000 w*; 35c.

Ruff and Martin.—*Ueber reines Vanadin;* [Pure vanadium, its preparation and properties].—Zts. f. angew. Chemie, Jan.12, 1912; p. 49-56*; 75c.

English abstract in Mng. Jnl., March9, 1912; p. 242; 1800 w; 35c.

Rzehulka, A.—*Die Bewertung der Kupfererze;* [Summary of treatment and smelter valuation of the various classes of cupper ores].—Centralbl. d. Hütten & Walzwerke, Feb.25,1912, p. 100; March5, p. 119; March15, p. 139; 3600 w; 65c.

Sandonnini, C.—*Thermische Analyse des Systems Kupferchlorid - Kupferchlorür;* [Fusing characteristics of the copper chlorides; brief German abstract of paper read in Italian to Reale Inst. Veneto di Scienze, Nov.,1911].—Chemiker Ztg., Feb.27,1912; p. 221; 100 w; 30c.

Savola, U.—*Miniere di zinco lombardo;* [Zinc mining, dressing and metallurgy in Lombardy and Upper Italy].—Milan, 1911; pp. —; (book).

Schertel, L.—*Studien über einige Verlustquellen des Blei- und Kupferhochofenprozesses;* [Studies on some sources of loss in the blast-furnace process for lead and copper].—Freiberg Bergakademie dissert., 1911; pp. —; (thesis).

Siebenthal, C. E.—*The Production of Lead in the U. S. in* 1911; [Smelter statistics].—U. S. Geol. Survey, Press Bulletin, March, 1912; 8 pp.; 10c.

Abstract in Mining & Engg. World, Apr. 20, p. 870; 1000 w; tables; 10c. Extract (list of smelters) in Mng. Sci., Apr.18, p. 348; 20c. Also in M. & S. P., Apr.20, p. 570; 1000 w; 20c.

Siepke, F. W.—*Die Verhüttung kupferhaltiger Industrieabfälle;* [Smelting of copper-bearing industrial waste-metal in Germany].—Metallurgie, Feb.22,1912, pp. 121-133; 9000 w*; 50c.

Steinhart, O. J.—*The Sale of Tin Ores;* [Charges at various centers].—Mng. Mag., March,1912; p. 202; 100 w; 35c.

Storey, O. W.—*The Sherardizing Process;* [Dry Galvanizing process with zinc dust].—Wisconsin Engr., Apr.,1912; p. 300; 3500 w; 30c. Abstract in Mng. Sci., July4, p. 562; 1000 w; 20c.

Swart, S. W.—*Some Observations on the Zinc Recovery Problem;* [From Colo. School of Mines Quar'ly].—Mining & Engg. World, Jan.6,1912; p. 18; 1000 w; 10c.

Tupper, C. A.—*Copper Smelting at the Kennett Plant, Cal.*—Mining & Engg. World, Feb.10,1912; p. 337; 2000 w*; 10c.

Turner, T.—*The Behavior of Certain Alloys When Heated in Vacuo;* [Zinc distillation and copper refining; read to Inst. of Metals; discussion].—Engnrg., Jan.19,1912; p. 89; 750 w; 30c.

Wachenfeld, H.—*Die Metall- und Eisengiesserei mit besonderer Berücksichtigung der Legierungen und Gattierungen für den Maschinenbau;* [The iron and metal foundry, with special reference to the alloys and mixtures for metal machinery].—Halle, 1911; 112 pp; 15 figs; $1.75 (book).

Walker, A. L.—*The Metallurgy of Copper in* 1911.—E. & M. J., Jan.6,1912, p. 47; 4000 w; 25c.

Waters, A. L.—*The Pioneer Smeltery, Arizona;* [Copper; near Tucson].—E. & M. J., May4,1912; p. 877; 1500 w*; 25c.

Weidig, M.—*Metallurgische und Technologische Studien auf dem Gebiete der Legierungs-Industrie;* [Metallurgic and technologic studies in industrial alloys].—Berlin,1911; pp. —; $2; (book).

Wemple, L. E.—*New Process for Refining Antimonial Lead;* [Babbitt, type and bearing metals; from Brass World].—Mining & Engg. World, Feb.10,1912; p. 356; 600 w*; 10c.

Whyte, F. W. C.—*Annual Address, President of the Montana Society of Engineers;* [Includes progress in copper mining and smelting].—Asso. of Engg. Soc's; Jnl.; May,1912; p. 266-273; 40c.

Wüst, F.—*Ueber die Schwindung der Metalle und Legierungen;* [Volume and form changes in the metals and alloys in smelting].—Eisenhüttenm. Inst. Aachen, Mittingn.; Vol. IV, 1911; pp. 20-43; $4.20.

Associazione fra gli Industriali Metallurgici Italiani.—*The Metallurgic Industry in Italy; Description of Some of the Principal Works.*—Milan, 1911; 430 pp*; $2.00.

S. E.—*De Metalurgia;* [Progress in Metallurgy in Europe and elsewhere; 1: zinc].—Rev. Minera, Apr.16,1912; p. 177; Apr.24, p. —; 3500 w; 50c.

"Smelter."—*Zinc Smelting in Kansas and Oklahoma.*—E. & M. J., Apr.27,1912; p. 849; 3200 w; 25c.

———. *A Brass Foundry of Modern Appointments;* [Eynons-Evans Mfg. Co. plant, Phila.; 2,000,000 lbs. annual capacity].—Iron Age, May23,1912; p. 1257; 2000 w*; 30c.

———. *A Handy Rig for Lighting the Cupola.*—Castings, Jan.,1912, p. 103; 500 w*; 20c.

———. *Calumet & Arizona Smeltery;* [Outlines proposed plans].—E. & M. J., Apr.,1912; p. 682; 1000 w; 25c.

———. *Copper Metallurgy in* 1911.—Met. & Cheml. Engg., Jan.,1912; p. 2; 1400 w; 35c.

———. *El Boleo Copper Smelting Practice.*—M. & S. P., May18,1912; p. 700; p. 685; 1800 w; 20c.

———. *Electricity in Foundries.*—El. Rev. (Chicago), June8,1912; p. 1095; 3600 w; 25c.

———. *Laboratorium und Laboratoriumspraxis;* [Foundry laboratory and laboratory practice].—Eisen Ztg., May25, 1912; p. 367; June1, p. 400; 3600 w; 50c.

———. *Mason Valley Smeltery, Nevada.*—E. & M. J., Feb.24,1912; p. 410; 600 w*; 25c.

———. *Method of Cost Keeping in German Foundries.*—Castings, Jan.,1912, p. 104; 1500 w; 1400 w; 20c.

———. *Moderne Tiegelschmelzen;* [Modern crucible smelting for the foundry; copper; German translation from "Fonderie Moderne"].—Eisen Ztg., March9,1912; p. 170; 2000 w; 35c.

———. *New Melting Point Determinations with an Electric Vacuum Furnace.*—Iron Age, Feb.8,1912; p. 360; 1000 w; tables; 30c.

———. *Progress of the Zinc Industry;* [in Australia, U. S. and Japan].—M. & S. P., Apr.27,1912; p. 587; 1400 w; 20c.

———. *Recent Copper Smelting;* [Compares Boleo and Anaconda plants].—M. & S. P., May18,1912; p. 685; 800 w; 20c.

———. *Smelter Charges in Utah;* [On Tintic and Park City silver-lead ores].—M. & S. P, Jan.20,1912, p. 145; 500 w; 20c.

———. *Suggestions for Preventing Foundry Accidents.*—Foundry, May,1912; 3½ pp*; 50c.

———. *The Balance Sheet in Smelting;* [Reviews limited demand for sulphuric acid by-product of copper smelters].—M. & S. P., March30,1912; p. 461; 1200 w; 20c.

———. *The Hygienic Side of Foundry Equipment.*—Castings, March,1912; p. 176; 1300 w; 25c.

———. *The International Smelter, Tooele, Utah.*—M. & S. P., March9,1912; p. 371; 1100 w*; 20c.

———. *The Manufacture of Brass and Copper at the Plants of Basse & Selve, Altena, Germany.*—Brass World, May,1912; 9½ pp*; 20c.

———. *The Proper Equipment of a Cupola;* [Translation in abstract from Giesserei Ztg.].—Castings, May,1912; p. 58; 2100 w; 25c.

———. *The Sumitomo Properties;* [Copper mining and smelting].—Far Eastern Rev., March,1912; 5 pp*; 75c.

———. *Ueber das Schmelzen von Zinn-*

krätze in kleinen Mengen; [Smelting of industrial metal wastes containing tin, to recover metal tin or tin oxide].—Giesserei Ztg., Jan.1,1912; p. 30; 500 w; 35c.

———. *Ueber Betriebsersparnisse und Verbesserungen in der Metallgiesserei;* [Economies and improvements in foundry practice].—Geisserei Ztg., Jan.1,1912, p. 16; Jan.15, p. —; 3500 w; 65c.

REFRACTORIES; LINING; WALL STRUCTURE

For Refractories see also under "Ceramics;" also under "Quartz; Silicates; Feldspars"; also Magnesite, Bauxite, etc.

Baker, D.—*Thin-Lined Blast-Furnace Construction.*—Iron Trade Rev., Dec.28, 1911, p. 1151; 1200 w*; 25c. Also in Iron Age, Dec.28, p. 1400; 1100 w*; 30c.

Benfey, G.—*Herstellung Feuerfester Erzeugnisse;* [The manufacture of refractory products].—Hannover, 1912; pp. —; $1.50 (book).

von Bernewitz, M. W.—*Peculiar Changes in Furnace Bricks.*—W. Australian Chamber of Mines, Monthly Jnl., Oct.31,1911, p. 259; 500 w; 75c.

Blackie, A.—*Behavior of Fused Silica at High Temperatures.*—Faraday Soc., Trans., Nov.,1911, p. 158-164*; $4.00.

Blottefière, R. de.—*Note sur les matériaux réfractaires;* [Theory, testing and manufacture of silicate refractories].—Rev. d. Matériaux, Nov.,1911, p. 193-B, 5000 w*; 65c.

Dixon, A. E.—*Firebrick Furnace Arches.*—Power, Feb.20,1912; p. 246; 1500 w*; 20c.

FitzGerald, F. A. J.—*Refractories;* [for electric furnaces; investigation of alundum, silicon carbide, magnesia, lime].—Met. & Cheml. Engg., March,1912; p. 129; 4000 w; 35c.

Italian abstract on crystolon (silicon carbide) in Rassegna Mineraria, Apr.11, p. 213; 1600 w; 40c.

le Gall du Tertre, G.—*Notice sur les matériaux réfractaires;* [Notes on silicious and aluminous refractories].—Rev. d. Matériaux, April,1912; p. 37B; 750 w; 65c.

Gary, M.—*Ueber die Prüfung feuerfester Steine nach den Vorschriften der Kaiserlichen Marine, insbesondere auf Raumbeständigkeit in der Hitze;* [Testing of refractory products for the German navy, with special reference to volume behavior under heat].—Berlin, 1912; 24 pp.; 14 figs.; 75c. (pamphlet).

Abstract in Ver. Deu. Ingr., Zts.; Jan. 6,1912; p. 24-26; 75c.

Havard, F. T.—*Notes on the History and Development of the Fireclay and Refractories Industry.*—Wisconsin Engr., Jan., 1912; p. 175; 2500 w*; 35c.

Abstract in Mining & Engg. World, July 13, p. 62; 1200 w; 10c.

Hering, C.—*The Flare of Furnace Walls.*—Met. & Cheml. Engg., March,1912; p. 159; 1000 w; 35c.

Hering, C.—*Excessive Heat Insulation.*—Met. & Cheml. Engg., Feb.,1902, p. 70; 600 w; 35c.

Hering, Carl.—*The Thermal Insulation of Furnace Walls;* [In electric furnaces].—Met. & Cheml. Engg., Feb.,1912, p. 97; 6000 w*; 35c.

Hering, Carl.—*Flow of Heat Through Contact Surfaces.*—Met. & Cheml. Engg., Jan.,1912, p. 40; 4800 w; 35c.

Heywood, W. E.—*Basic Lining;* [Results at Butte].—Mng. Mag., April,1912; p. 287; 1000 w; 45c.

Marc, R.—*Referat über die bis zum Jahre 1911 aus dem Geophysical Laboratory, Carnegie Institution in Washington hervorgegangen Arbeiten;* [Review of work of the Geo-Physical Laboratory, Washington, up to 1911 on the melting of silicates].—Zts. f. Elektrochemie, Jan.1,1912; p. 2; 8000 w; 40c.

Perkins, W. G.—*Basic Lining for Converters.*—Mng. Mag., Feb.,1912; p. 119; 1600 w; 45c.

Ruff, O., and O. Goecke.—*Ueber das Schmelzen und Verdampfung unserer sogenannten hochfeuerfesten Stoffe;* [Fusion and vaporization of the so-called extra-refractories at 2000°C. and over; read to Ver. Deu. Chemiker, 1911].—Zts. f. angew. Chemie, Aug.4,1911, p. 1459; 4200 w*; 40c. Also in Ton-Industrie Ztg., Oct.5,1911, p. 1395; Oct.12, p. 1424; 4200 w*; 35c. Also in Zts. f. Elektrochemie, March1,1912; p. 164; 4200 w; 45c. Abstract in Chemiker Ztg., June15,1911, p. 650; 1600 w; 30c. Also in Metallurgie, Vol. 8, 1911, p. 667; 1000 w; 45c.

Verein Deutcher Fabriken Feuerfester Produkte E. V.—[*Abstract of proceedings and papers read at the 32d general meeting of the Association of German Manufacturers of Refractory Products, Berlin, March* 2,1912; in German].—Ton-Industrie Ztg., Apr.4,1912; p. 588; 3000 w; 25c.

J. Bartley Crucible Co.—*The Use and Care of Graphite Crucibles in Foundry Practice.*—Met. & Cheml. Engg., March, 1912; p. 182; 1000 w; 35c.

———. *Basic Lining for Converters* [Superiority at Copper Queen works, Ariz.].—Mng. Mag., Dec.,1911, p. 413; 750 w; 35c.

———. *Beiträge zur Kenntnis der feuerfesten Materialen;* [Studies on Refractories; 1: Quartz and silicate brick and effect of lime; 2: Magnesite and kaolin mixtures; 3: manganese and titania].—Centralbl. d. Hütten & Walwerke, Dec.15,1911, p. 673; Dec.25, p. 694; Jan.5,1912, p. 8; 3000 w; tables; 65c.

———. *Expansion des briques Dinas et des briques siliceuses;* [Expansion in Dinas silica brick].—Rev. d. Matériaux, May, 1912; p. 57-B; 1000 w*; 65c.

———. *Feuerbeständige Materialen;* [Fire resisting materials in metallurgy].—Centralbl. d. Hütten u. Walzwerke, Sept.15, 1911, p. 493; Sept.25, p. 511; Nov.25, p. 632; 3000 w; 65c.

———: *Thermal Conductivity and Resistivity.*—Wisconsin Engr., Apr.,1912; p. 317; 3000 w; 30c.

FUELS; COMBUSTION

See also under "Coals," also under "Petroleum;" also under "Steam" in Chapter 12.

Benner, R. C.—*Surface Combustion;* [Principles and application in muffle and crucible furnaces].—M. & S. P., March2, 1912; p. 336; 1600 w*; 15c. Abstract in Cheml. Engr., March,1912; p. 123; 2000 w*; 35c.

Bleininger, A. V.—*Surface Combustion.*—Brick, Jan.1,1912; p. 31; 1200 w*; 20c.

Bone, Wm.—*Surface Combustion;* [Special lecture before Cavendish Society, Leeds University; abstract].—Engnrg., May 10,1912; p. 632; 3000 w*; 35c.

Bone, Wm. A.—*Surface Combustion;* [Read to Franklin Inst., Oct.30,1911].—Frankl. Inst., Jnl.; Feb.,1912; p. 101-132*; 65c. Abstract in Engg. Rev., March15, p. 367; 10,000 w*; 35c.

Bone, Wm. A.—*The Flameless Incandescent Surface Combustion of Gases;* [Read to Amer. Gas Inst., St. Louis, 1911; abstract].—Iron Age, Dec.7,1912, p. 1248; 4000 w*; 30c. Also in E. & M. J., Jan.20,1912, p. 177; 4500 w*; 25c. Also in Mng. Mag., Jan.,1912, p. 68; 600 w; 45c. Also in Engg. News, Jan.18, p. 96; 2500 w*; 25c.

Brislee, F. J.—*An Introduction to the Study of Fuel* [and technical application].—London, 1912; pp. 258; 61 figs.; $2.50; (book).

Butler, E.—*Some Modern Developments in Oil Burning Apparatus.*—Engg. Rev., Oct.,1911, p. 168; Nov., p. 243; Dec., p. —; Feb.15, p. 329; 6000 w*; 75c.

Coste, J. H.—*The Calorific Power of Gas.*—London, 1911; 326 pp.; $2.25 (book).

Dichmann, C.—*Ueber das Wesen der Flamme unserer technischen Feuerungen;* [Technical notes on flame structure in various industrial firings].—Riga Ind. Zts., Jan.15,1912, p. 1; Jan.31, p. 17; Feb.15, p. 33; Feb.29, p. 49; March15, p. 65; 10,000 w*; 90c.

Eulenstein, Fr.—*Betrachtungen über die Wärmebilanz eines Siemens-Zinkofens;* [Heat reactions and thermal factors in the Siemens zinc furnace].—Metallurgie, May 22,1912; p. 328; June8, p. 353; June22, pp. 396-408; 14,000 w; $1.

Eyer, Ph.—*Wieviel der angewandten Wärme wird in den Emaillier-, Brenn-, und Schmelzöfen nutzbar?* [How much of the heat applied in enamelling and smelting furnaces and ovens is utilized?].—Eisen Ztg., Dec.30,1911, p. 939; 1800 w*; 35c.

Fletcher, Russell & Co., Ltd.—*Gas-Heated Furnaces for Metallurgical Purposes.*—Engnrg., Feb. 2.1912; p. 147; 500 w*; 30c.

Guess, Geo. A.—*Notes on Pyritic Smelting.*—E. & M. J., Jan.13,1912, p. 113; 7000 w; 25c.

Hamilton, E. H.—*L'emploi des huiles combustibles en fonderie;* [Use of fuel oil in the foundry].—Echo d. Mines, June3, 1912; p. 654; 500 w; 35c.

King, J.—*The Commercial Application of Town's Gas for Furnace Work;* [Use of urban gas in pottery and other furnaces].—English Ceramic Soc., Trans., Vol. 11, Part 1; 1912; pp. 104-117*; $6.

Mettler, G.—*Permanente Gase und Industrie - Gase, Sauerstoff - Oefen, Sauerstoff-Brenner, Gas-elektrische Oefen;* [Commercial gases, gas and oxygen furnaces and burners, and gas-electric furnaces].—Leipzig, 1912; 13 pp*; 49 figs; $1 (book).

Percy, E. N.—*Other Industrial Applications of Oil Burning;* [Smelting; lime and cement, brick and refractories manufacture].—Jnl. of El'y Power & Gas, Jan.6, 1912; p. 8; 3000 w*; 35c.

Percy, E. N.—*Oil Burners;* [How to install and maintain burners and furnaces using oil fuel].—Jnl. of El'y Power & Gas, Dec.16,1911, p. —; Dec.23, p. 588; Dec.30, p. 613; Jan.6, 1912; p. —; 8000 w*; $1.10.

Perkins, F. C.—*An Oil-Fired Converter;* [Darlington converter for steels].—Mines & Minerals, Apr.,1912; p. 565; 1200 w*; 35c.

Pitaval, R.—*La fabrication du coke métallurgique et l'éclairagne au gaz;* [Manufacture of coke for the metallurgic and gas-light industries].—Monitr. de l'Industri du Gaz, 1911, No. 20, pp. 457-459; 75c.

Ralli, C.—*La consommation de combustible dans la fusion des minerais de cuivre et de plomb;* [Studies of fuel combustion and consumption in the smelting of copper and of lead].—Rev. Univ. d. Mines, Vol. 34, p. 213-296; Vol. 35, pp. 1-104*; $2. Abstract in Rev. de Mét'l'gie, Feb.,1912; p. 84; 2600 w; $1.15.

Simmersbach, O.—*Coke Oven Gas in Open Hearth Furnaces.*—See page 91.

Sonnabend, W.—*Rohölfeuerung in der Eisenindustrie;* [Crude-oil fuel and firing in the iron and steel smelting industry].—Centralbl. d. Hütten & Walzwerke, May25, 1912; p. 270; 2000 w; 45c. Also discussed in Eisen Ztg., June1,1912; p. 401; 1500 w; 35c.

Walter, E. W.—*Air in Pyritic Smelting.*—E. & M. J., Apr.20,1912; p. 797; 2100 w; 25c.

Winckler, H.—*Emploi du gaz dans la petite industrie;* [Industrial uses of gas fuel; includes muffle and reverberatory furnaces].—Bull. Techniq. du Nord, Feb.-March, 1912; p. 38-48; 75c.

———. *Die Untersuchung von Giessereikoks;* [The testing and examination of foundry coke].—Eisen Ztg., May4,1912; p. 311; May11, p. 331; 2500 w; 50c.

———. *Economizing of Fuel in the Melting of Brass.*—Castings, Jan.,1912, p. 101; 500 w*; 25c.

———. *Spelter and Natural Gas;* [Reviews rise of zinc-smelting industry in Kansas-Oklahoma gas-fields].—Met. & Cheml. Engg., Dec.,1911, p. 620; 700 w; 35c.

———. *Surface Combustion:* [Lucke patents of 1900 vs. Bone process].—Jnl. of Ind'l & Engg. Chem'y, Feb.,1912; p. 77; 2000 w*; 65c.

———. *The Parkison Furnace;* [For complete, smokeless combustion; its use at Colorado smelters].—Mng. Scl., Jan.25,1912, p. 116; 4000 w*; 25c.

PYROMETRY

Adams, L. H., and Johnston, J.—*A Note on the Standard Scale of Temperatures between 200° and 1100°.*—Amer. Jnl. of Sci., June, 1912; p. 534-545; 65c.

Barus, C.—*A Displacement Interferometer Adapted for High Temperature Measurement, etc.*—Amer. Jnl. of Sci., Feb.,1912; p. 109; 4500 w*; 65c.

Bodenstein, Max.—*Methods of Maintaining Higher Temperatures.*—Faraday Soc., Trans., Nov.,1911, pp. 167-173*; $4.00.

Burgess, C. K. and H. Le Chatelier.—*The Measurement of High Temperatures.*—New York, 1912 (3d edition); 507 pp.; $4 (book).

Busse, C. F.—*Pyrometers and Boiler Efficiency.*—Power, May21,1912; p. 728; 2000 w*; 15c.

le Chatelier, H., and W. Broniewski.—*Sur un enregistreur photographique;* [The photographic recording of metal tests, pyrometric points and other applications in metallurgic arts].—Rev. de Métallurgie, March, 1912; pp. 133-146*; $1.15.

Darling, Ch. R.—*Pyrometry; A Practical Treatise on the Measurement of High Temperatures.*—London, 1911; 22 pp.; $1.50; (book).

Day, Arthur L.—*Recent Advances in High-Temperature Gas Thermometry.*—Faraday Soc., Trans., Nov.,1911, p. 136-144; $4.00.

Day, A. L., and R. B. Sosman.—*High Temperature Gas Thermometry; (With an Investigation of the Metals,* by E. T. Allen).—Carnegie Instn., Publication No. 157; 1911; 129 pp*.

Gordon, C. S.—*The Installation and Use of Pyrometers in Steel Mills;* [Illinois Steel

Co. works].—Met. & Chemi. Engg., June, 1912; p. 331; 3500 w*; 35c.

Lenk, A.—*Latest Progress in Optical Pyrometry;* [Scimatico equipment].—Met. & Chemi. Engg., March,1912; p. 183; 1200 w*; 35c.

Lovibond, J. W.—*A New Pyrometer;* [Tinto-metric system].—English Ceramic Soc., Vol. 11, Part 1, 1912; p. 1; 3500 w*.

Rautenkrantz, J. — *Modern Electrical Methods of Measuring Temperature;* [read *to Elektrotechn. Ver. Vienna*].—Electrician, Dec.8,1911, p. 349; 2700 w*; 35c.

Schramm, A.—*The Heraeus Resistance Thermometer.*—E. & M. J., Feb.17,1912; p. 355; 500 w; 25c.

Schwartze, —. *Elektrische Temperaturmessung und Fernablesung unter besonderer Berücksichtigung des thermoelektrischen Verfahrens;* [Electrical measurement of temperature and pyrometric recording with special reference to the thermo-electric system].—Ver. Deu. Ingr., Zts., Feb.10; pp. —; Feb.17, pp. 259-264*; $1.

Shook, G. A.—*Radiation Pyrometry.*—Met. & Chemi. Engg., April,1912; p. 238; 3500 w*; 35c.

Shook, G. A.—*Radiation Pyrometry; II: Theory of Radiation Pyrometers.*—Met. & Chemi. Engg., June,1912; p. 334; 2700 w*; 35c.

Stephan, E.—*Pyrometers as Seen by a Practical Man.*—Brick, Apr.15,1912; p. 381; 1000 w; 20c.

———. *High Temperature Work;* [Thermometry, and boiling points of metals and metalloids].—Engnrg., Feb.9,1912; p. 187; 3500 w; 35c.

———. *Temperaturmessung im Kalkschachtofen;* [Temperature measurement in the shaft lime kiln].—Ton-Industrie Ztg., Feb.27,1912; p. 348; 400 w*; 30c.

———. *Un pyromètre pour fours Hoffmann;* [Féry radiation pyrometer; from British Clay Worker, July,1911].—Rev .d. Matériaux, Dec.,1911, p. 207B; 500 w*; 65c.

BLAST AND DRAFT

See also "Blast Furnace Practice," page 90-91.

For Blowers, see also Compressors, under "Compressed Air," Chapter 12.

Adams, H.—*The Design of Tall Chimneys;* [Read to English Soc. of Engrs.; abstract].—Canadn. Engr., Feb.1,1912; p. 239; Feb.8, p. —; 3000 w*; 25c. Also in Mining & Engg. World, Feb.3,1912; p. 286; 400 w; 10c. Also in Ind'l Engg., March, 1912; p. 198-205; 3500 w*; 30c.

Barbour, P. E.—*Structural and Corrugated-Steel Stack;* [at Garfield, Utah, copper smelter; from Worcester Polytechnic Inst., Jnl., Nov.,1911; abstract].—E. & M. J., Feb.10,1912; p. 303; 750 w*; 25c.

Van Brussel, J. B.—*Blast Dessication by Calcium Chloride.*—E. & M. J., March23, 1912, p. 595; 1800 w*; 25c.

Contzen, H.—*Messgeräte für Druck und Schwindigkeit von Gasen und Dampfen;* [Meters for pressure and speed of gases and steam; supplementary to E. Stach's paper of 1911].—Stahl & Eison, Apr.4,1912; p. 573; 1200 w*; 75c.

Deinlein, —. *Untersuchungen über den Schornsteinzug;* [Tests of chimney draft]. —Bayer. Dampfk. Ver., Zts., Feb.15,1912; pp. 24-26; March15, pp. 41-42*; $1.

Essich, Otto.—*Theorie und Berechnung der Turbogebläse und Turbokompressoren;* [Theory and computations of turbo-blowers and turbo-compressors]. — Techn. Hochschule Carolo-Wilhelmina Braunschweig, Dissert., 1911; pp. —; $1; (Thesis).

Gayley, Jas.—*Refrigeration Plant for Dry-Air Blast.*—Iron Age, Jan.4,1912; p. 53; 1000 w; 65c.

Hermanns, —. *Ueber künstlichen Zug bei Dampfkesselanlagen;* [Artificial draft in boiler plants].—Glaser's Annalen d. Gewerbe, May15,1912; pp. 194-197*; 50c.

Jensen, J. N.—*The Design of a Brick Chimney.*—Engg. News, May9,1912; p. 866; 3600 w*; 25c.

Leese, J. S.—*Steel Chimney .Stacks;* [From Practl. Engr.].—Chemi. Engg., Jan., 1912; p. 396; Feb., p. —; 3000 w; 75c.

Leese, J. S.—*Low Pressure Fans.*—Power, March19,1912; p. 394; 1000 w; 15c.

Lindner, G.—*Wirkung von Ventilatoren und Kapselgebläsen;* [Computations of air pressure and air consumption for foundry blowers].—Giesserei Ztg., Feb.15,1912, p. 107; 2000 w; 40c.

Lürmann, F. W.—*Vorteile, Nachteile und Kosten der Zumischung von Sauerstoff zum Gebläsewinde der Hochöfen;* [Advantages, drawbacks and costs of adding oxygen to the blast].—Stahl & Eisen, Apr.11,1912; p. 609; 2000 w*; 75c.

English abstract in Iron Age, May2, p. 1102; 600 w; 30c.

Maguire, T. F. J.—*Relative Economy of Various Types of Draft Equipment · Forced Mechanical Draft.*—Engg. Mag., May,1912; pp. 198-205; 5000 w*; 35c.

Miles, J. B.—*New Dry-Blast Process for Iron Furnaces;* [Cooling after compression at Northern Iron Co. plant, Standish, N. Y.]. —Iron Trade Rev., Apr.25,1912; p. 901; 2000 w*; 20c. Also in Iron Age, Apr. 25, p. 1022; 1500 w*; 30c. Also in Iron & Coal Trades Rev., Apr.26,1912; p. 635; 1500 w*; 35c.

Naegeli, H.—*Bestimmung von Gasmengen in Eisenhüttenbetrieben;* [Flue-gas analysis and the determination of the amount of gas requisite in the blast furnace].— Stahl & Eisen, Apr.11,1912; p. 617; 1000 w*; 75c.

Rateau, A.—*Turbogebläse der Hochöfen von Biscaya;* [Turbo-blowers at the Biscaya blast furnaces; from Oestr. Ingr. & Archt. Ver., Zts., Oct.6,1911; abstract].—Montanist. Rundschau, Feb.1,1912; p. 120; 500 w; 45c.

Schmatolla, E.—*Natural Draft and Natural Pressure;* [With special reference to a producer-gas fired shaft-kiln for lime, magnesite or other stone].—Natnl. Lime Mfrrs. Asso., Proc. 10 Annual Convention, Bull. No. 9; 1912; 23 pp.*; 50c.

Wüst, F.—*Ueber die Ursachen der Brennstoffersparnis und der Mehrerzeugung beim Hochofenbetrieb durch die Verwendung erhitzten und getrockneten Windes;* [The reasons for fuel economy and increased production resulting from warming and drying the blast].—Eisenhüttenm. Inst. Aachen, Mittlngn.; Vol. IV, 1911; pp. 142-154*; $4.20.

———. *Dry Air Blast;* [Development of British practice in iron and steel plants].— Iron & Coal Trades Rev., May17,1912; p. 804; 1500 w*; 35c.

———. *Fan vs. Chimney.*—Practl. Engr., Apr.15,1912; p. 397; 300 w; 20c.

———. *Gehört der Schornstein in die Mitte des Ofens?* [Does the chimney belong in the center of the furnace?].—Ton-industrie Ztg., Dec.2,1911, p. 1696; 600 w; 35c.

———. *Neuer Windmesser für Kupolöfen;* [New air meter for cupolas].—Giess-

erei Ztg., Jan.15,1912; p. 62; 1000 w*; 35c.

———. *The Analogy Between a Blast Furnace and a Modern Building on Fire.*—Met. & Cheml. Engg., Feb.,1912, p. 64; 750 w; 35c.

———. *The Cloverleaf Concrete Chimney;* [Describes this Danish type of construction].—Cement, March,1912; p. 305; 250 w; 30c.

———. *Turbo-soufflante d'aciérie de grande puissance;* [High-power turbo-blower at Sambre-et-Moselle steel converters; 150 to 800 cu. meters of air per minute at 0.4 to 2.5 kgms. pressure per sq. cm.].—Echo d. Mines, March25,1912; p. 383; 500 w; 35c.

FEEDING; DISCHARGING; SLAGS

See also "Blast Furnace Practice and Slags in Siderurgy," pages 90-91.

Abels, C.—*Eine neue Brechanlage für Hochofenschlacke;* [Slag-crushing plant and practice at the Burbach iron works, Prussia].—Stahl & Eisen, Apr.11,1912; p. 615; 1600 w*; 75c.

Avery, C. M.—*The New Granby Slag-Disposal Plant.*—"The Labor Saver." April, 1912; 2¼ pp*. Abstract in E. & M. J., May11, p. 935; 1000 w*; 25c.

Blome, H.—*Ueber die Konstitution der Thomasschlacke;* [Composition of Thomas basic phosphatic slag].—Zentralbl. f. Kunstdünger-Ind., March21,1912; p. 91; 1000 w; 35c.

Cartiaux, J.—*Températures observées aux fours à ciment au moyen du pyromètre optique de Wanner;* [Temperatures observed in cement ovens with the Wanner optical pyrometer].—Rev. d. Matériaux, Nov.,1911, p. 201; 750 w; 65c.

Chauvenet, R.—*Calculation of Furnace Charges.*—Met. & Cheml. Engg., Jan.,1912, p. 36; Feb., p. 104; March, p. 135; April, p. 220; 13,000 w*; $1.15.

Elsing, M. J.—*Handling Furnace Charges at Cananea.*—M. & S. P., May4,1912; p. 619; 1800 w*; 20c.

Küppers, A.—*Ein Beitrag zur Frage der Hochofenbegichtung;* [New automatic charging equipment for the blast furnace].—Stahl & Eisen, Apr.11,1912; p. 619; 1600 w*; 75c.

Masselon, E.—*La manutention mécanique dans la fonderie;* [Trolleys and mechanical transportation and handling in foundries].—Métallurgie, Apr.16,1912; p. —; Apr.23, p. 259; Apr.30, p. —; 2400 w*; 65c.

McLain, David.—*Methods Employed in Mixing and Melting;* [Read to Pittsburgh Foundrym. Asso.; abstract]. — Castings, March,1912; p. 167; 5500 w*; 25c. Also in Iron Age, March14, p. 670; 3600 w; 30c.

Wanjukovf, W. — *Untersuchungen über die beim Steinschmelzen den Eintritt des Kupfers in die Schlacken beeinflussenden Umstände, über die Verbindungsform des Kupfers innerhalb der Schlacken, und über die Verminderung der Kupferverluste durch Verschlackung;* [Researches on the conditions controlling the entry of copper into the slag in smelting copper ore, on the chemical affinities of the copper in the slag, and methods of lessening copper losses in slag].—Metallurgie, Jan.8,1912, p. 1-27*; Jan.22, p. 48-62*; $1.

———. *Les accumulateurs-matières dans les hauts-fourneaux;* [Ore and flux feeding system at the Perigord blast-furnaces at Fumel].—Rev. Pratiq. d. Ind's Mét'l'gq., Feb.,1912; p. 1; 500 w*; 40c.

———. *Utilization of Slag Heat;* [Experimental plant on Vautin patent].—Iron & Coal Trades Rev., Apr.19,1912; p. 607; 1000 w*; 35c.

FUMES, DUST AND GAS

See also "Slags, Flue Dust and Gas" in Siderurgy, page 91.

For briquetting of flue dusts, see Briquetting under "Waste Disposition."

Bleeker, W. F.—*An Electrolytic Method for the Reduction of Blue Powder;* [Zinc dust in condensers].—Amer. Electrocheml. Soc., Trans. for April,1912; 9 pp; 2800 w; 50c. Abstract in Mining & Engg. World, May4,1912; p. 951; 2400 w; 10c.

Cottrell, F. G.—*Mineral Losses in Gases and Fumes.*—Jnl. of Ind'l & Engg. Chem'y, March,1912; p. 182; 3000 w*; 65c. Abstract in M. & S. P., March30, p. 467; 2500 w; 20c.

Cottrell, F. G.—*Flue Dust Precipitation by Electrostatic Means;* [at Balaklala copper smelter, Cal.].—Amer. Inst. Mng. Engrs., Trans.; read Feb.,1912; pp. ——*; $1.15.

Abstract in Met. & Cheml. Engg., March, p. 172; 1600 w*; 35c.

Eddy, L. H.—*Thiogen Process Demonstration;* [Treating McDougal-roaster gases for sulphur at Penn Smelter, Campo Seco, Cal.].—E. & M. J., May4,1912; p. 873; 1500 w*; 25c.

Abstract in Italian in Rassegna Mineraria, May21, p. 286; 500 w; 35c.

Friedrich, A.—*Die Schwefelsäure-Produktion der oberschlesischen Zinkindustrie;* [Sulphuric acid production in the zinc smelters of Upper Silesia].—Techn. Blätter, Feb.17,1912; p. 52; 2000 w; 35c.

Reprint in Zentralbl. f. Kunstdünger-Ind., March7, p. 73; March21, p. 85; 50c.

Friedrich, K.—*Studie über die Verdichtung des Hüttenrauches;* [Studies on the various processes of smelter-fume condensation].—Inst. f. Metallographie, etc., an Freiberg; Mittlngn. f. 1910; pp. 76-95*; $3.20.

Guillemain, C.—*Theorie und Praxis der Staubverdichtung und der Reinigung und Entstaubung von Gasen;* [Theory and practice of dust concentration and the purification and dust-freeing of gases].—Halle, 1911; 54 pp.; $1; (book).

Hasenclever, Max.—*Manufacture of Sulfuric Acid;* [Progress with pyrite, blende, galena and copper; Hunter Memorial lecture, Liverpool Univ., Oct.,1911; abstract].—E. & M. J., Jan.20,1912, p. 175; 3000 w; 25c.

Holzhüter, E.—*Briquetage des minerais et poussières de hauts-fourneaux par le procédé Weiss;* [Briquetting of ores and flue dusts by the Weiss process].—Rev. de Mét'l'gie, Jan.,1912, p. 44-49*; $1.15.

Hughes, L. S.—*A Method for the Utilization of Lead Furnace Fume;* [Chrome from open-hearth fumes].—Jnl. of Ind'l & Engg. Chem'y, April,1912; p. 262; 1800 w; 65c.

Abstract in Mining & Engg. World, Apr. 27, p. 901; 1800 w; 10c.

Johannsen, O.—*Ueber Staubbestimmung in Gichtgas;* [Estimation of dust in flue gases; report of chemical committee of Ver. Deu. Eisenhüttenleute].—Stahl & Eisen, Jan.4,1912; p. 16; 2500 w; 75c.

von Kéler, H.—*Die wichtigsten Fortschritte auf dem Gebiete der anorganischen Grossindustrie im Jahre* 1911; [Most important advances in the chemical industries in 1911; (1): sulphuric acid].—Zts. f. angew. Chemie, March8,1912; p. 454; 5000 w*; 50c.

Low, V. F. S.—*Impressions Gathered While Traveling;* [Includes notes on Washoe smelter, Montana, and Garfield plant, Utah]. —Australia Mng. Standd., Apr.11,1912; p. 337; Apr.18, p. 362; Apr.25, p. —; 7000 w*; 65c.

Martin, Al. H.—*Progress of Smelter Smoke Control in California;* [Baghouse system at Mammoth Copper Co. plant at Kennett].—Mng. Sci., Apr.4,1912; p. 306.; 2400 w*; 20c. Also described by Martin in Mines & Methods, April; p. 437; 2100 w*; 20c.

Nelson, W. A.—*Sulphuric Acid Manufacture in Tennessee* [At Ducktown copper smelters].—Mng. Sci., Feb.8,1912; p. 149; 2000 w*; 20c. Reprinted in Mines & Methods, Feb.,1912; p. 407*; 25c.

Peter, —. *Die Verwertung der heissen Abgase von Flammöfen zur Dampferzeugung;* [Utilizing the hot gases given off by reverberatory furnaces, for raising steam].—Stahl & Eisen, May16,1912; pp. 811-816; May23. p. —; $1.

Phalen, W. C.—*Sulphur, Pyrite and Sulphuric Acid in* 1911; [Production in U. S., with "Notes on the Manufacture of Sulphuric Acid from Smelter Fumes at Ducktown, Tenn.," by F. B. Laney; pp. 24-30].— U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 30 pp; 20c.

Vogel, F. A.—*Sintering and Briquetting of Flue Dust;* [Reviews various processes]. —Amer. Inst. Mng. Engrs., Trans.; May, 1912; pp. 533-544*; $1.15.

Abstract in Met. & Cheml. Engg., March, 1912, p. 164; 1000 w; 35c. Also in Iron Age, March 7, p. 588; 1800 w; 30c. Also in Iron Trade Rev., March7, p. 551; 2000 w*; 20c. Also in Iron & Coal Trades Rev., March22,1912, p. 457; 1000 w; 30c. Also in M. & S. P., April6, p. 503; 1800 w; 20c. Also in Cheml. Engr., June, p. 250; 1600 w; 35c.

Wilson, F. L.—*Experiments with the Thiogen Process;* [Sulphur recovery from smelter and roasting fumes].—M. & S. P., Apr.6,1912; p. 497; 1800 w*; 20c.

Dr. H.—*Zur Frage der Brikettierung des Gichtstaubes;* [The briquetting of flue dust].—Stahl & Eisen, Feb.15,1912; p. 265; 2500 w; 75c.

———. *Osborn's Spark Arrestor for Cupolas.*—Engnrg., Jan.5,1912; p. 13; 500 w*; 35c.

———. *Prevention of Smoke by Combustion;* [Addition of fireclay tubes in the furnace to retain the heat for burning distilled gases].—Mines & Minerals, May,1912; p. 584; 1800 w*; 35c.

———. *Progresos en los hornos de Cuba;* [Progress in lead and copper metallurgy; water-jackets; electrolytic lead refining; flue dust control].—Mex. Mng. Jnl., June,1912; p. 58; 1000 w; 10c.

———. *Purification of Blast-Furnace Gas;* [Halberg-Beth process at Dingler works, Zweibrücken].—Iron & Coal Trades Rev., Apr.12,1912; p. 570; 1000 w*; 35c.

———. *Smelter Fume in Japan.*—M. & S. P., March9,1912; p. 364; 1500 w; 20c.

———. *The Purification of Blast-Furnace Gas;* [Halberg-Beth process].—Iron & Coal Trades Rev., May3,1912; p. 684; 1000 w*; 35c.

BLAST ROASTING; ROASTING AND DRYING FURNACES

See also Drying in Chapter 10.

Bannister, C. O.—*On the Theory of Blast Roasting of Galena.*—Instn. of Mng. & Met'gy, Bull. 89, Feb.,1912; pp. 1-56*; 50c. (Discussion), Bull. 89, March, p. 3-21; Bull. 91, pp. 1-4; Bull. 94, pp. 17-18; $1.

Abstract in E. & M. J., Apr.13, p. 750; 2700 w*; 25c. Also in Mines & Minerals, May, p. 607; 3000 w*; 35c.

Barth, O.—*Verarbeitung einer gerösteten bleireichen Kobalt-Nickelspeise;* [Treatment of a roasted cobalt-nickel speiss rich in lead].—Metallurgie. March22,1912; p. 199-216*; 50c.

English abstract in Soc. of Chem'l Ind'y Jnl., May,1912; 500 w; 65c. Reprint in E. & M. J., June1, p. 1096; 25c.

Bryden, C. L.—*Blast Roasting;* [Reviews various processes, including Dwight-Lloyd]. —Board of Trade Jnl. (Scranton), April, 1912; p. 19; 3600 w; 20c. Reprint in Mining & Engg. World, June29, p. 1351; 10c.

Clerc, F. L.—*Igneous Concentration of Zinc Ore.*—E. & M. J., Jan.13,1912, p. 127; 6000 w; 25c.

Déjardin, L.—*Les progrès modernes de la métallurgie du plomb;* [Recent advances in the metallurgy of lead].—Bull. Techniq. du Nord, Feb.-March,1912; p. 1-7; 2500 w; 75c.

Dwight, A. S.—*Efficiency in Ore Roasting* [Lead and copper; reviews various systems].—Columbia Univ. School of Mines Quar'ly, Nov.,1911, pp. 1-18; 65c.

Abstract in Mining & Engg. World, Jan. 13,1912; p. 55; 5000 w; 10c. Also in Mng. Sci., Feb.1, p. 127; Feb.8, p. 147; Feb.15, p. 173; Feb.22, p. 189; 5000 w; 50c.

German abstract in Techn. Blätter, Feb. 10, p. 45; 750 w; 45c.

Gayley, Jas.—*The Sintering of Fine Iron-Bearing Materials;* [Dwight-Lloyd system on Cuban and other ores and flue dusts].— Amer. Inst. of Mng. Engrs., Bull. 56, Aug., 1911; p. 631; 300 w*; $1.15.

Abstract in E. & M. J., July15,1911; p. 115; 2000 w; 25c. Also in Iron Age, Aug. 24, p. 422; Jan.4,1912, p. 73; 4500 w*; 50c. Also in Iron Trade Rev., Aug.24,1911, p. 336; 3000 w*; 20c. Also in Iron & Coal Trades Rev., Sept.1,1911, p. 313; 3000 w; 30c. Also in Mines & Minerals, Apr.,1912; p. 559; 1900 w*; 35c.

Hofman, H. O., and W. Wanjukow.—*The Decomposition of Some Metallic Sulphates at an Elevated Temperature in a Current of Air.*—Amer. Inst. Mng. Engrs., Trans.; read Feb.,1912; pp. ——; $1.15.

Hofman, H. O.—*The Metallurgy of Lead in* 1911.—E. & M. J., Jan.6,1912, p. 43; 2200 w; 25c.

Hommel, W.—*Die Prinzipien der Blenderöstung in Muffelöfen;* [The principles of zinc blende roasting in the muffel furnace]. —Metallurgie, May8,1912; p. 281; 12,000 w*; 50c.

In German in Zts. f. angew. Chemie, Jan.19,1912; pp. 97-100*; 75c.

Jesser, —. *Ueber Sinterungsvorgänge;* [Reactions in the sintering and smelting of silicates].—Berg & Hüttenm. Jahrb. Leoben-Pribram, Vol. 59, No. 4; pp. 355-369; $1.50.

Klugh, J. G.—*Sintering of Fine Iron-Bearing Materials by the Dwight-Lloyd Process.*—Amer. Inst. Mng. Engrs., Trans.; May,1912; pp. 507-526; $1.15.

Abstract in Met. & Cheml. Engg., March, 1912; p. 162; 2200 w*; 35c. Also in Iron Trade Rev., March7, p. 544; 2200 w*; 20c.

Klugh, B. G.—*Turning Pyrite Cinders into Profit;* [Dwight-Lloyd sintering for recovery of iron].—Amer. Fertilizer, p. 54; 1000 w; 25c.

Meade, R. K.—*Portland Cement; Its Composition, Raw Materials, Manufacture, Testing and Analysis.*—Easton, Penn.; 1911 (2d edition); 512 pp*; $4.50 (book).

Mostowitsch, Wl.—*Ueber das verhalten des Zinksulfats bei hohen Temperaturen;* [The behavior of zinc sulfate at high temperatures].—Metallurgie, Dec.22,1911; p. 763-791; 50c.

Nicholl, J. S.—*Mechanical Drying Furnaces.*—Mines & Minerals, Apr.,1912; p. 561; 1600 w*; 35c.

Pulsifer, H. B.—*The Important Factors in Blast Roasting.*—Met. & Chemi. Engg., March,1912; p. 153; April, p. 207; 12,000 w*; 65c.

Reprinted in Salt Lake Mng. Rev., May 30, p. 15; June15, p. 15; July15, p. 25; July30, p. 14, 15,000 w; 75c.

Richard, Dr.—*Ofen zur sulfatisierenden Röstung kupferhaltiger Kiese;* [Oven for roasting cupriferous pyrite to obtain water-soluble copper sulphate].—Chemiker Ztg., May21,1912; p. 565; 1000 w; 35c.

Schmieder, P.—*The Schmieder Rotary Zinc Roasting Furnace;* [U. S. Pat. No. 1.004,916; German Pat. No. 244,131].—Mining & Engg. World, Nov.18,1911; p. 1018; 1000 w*; 10c.

Also described in German in Metallurgie, May22,1912; p. 327; 1000 w*; 50c.

Schütz, E.—*Die Entwickelung der Zinkblenderöstung;* [Development of zinc blende roasting in Europe and America].—Metallurgie, Oct.22,1911, p. 635; Nov.22, p. 713; 10,000 w*; 80c.

English abstract of part 1, by O. Hahn, in E. & M. J., March16,1912; p. 557; 3600 w*; 25c.

French abstract in Rev. de Mét'l'gie, June,1912; p. 336; 2100 w*; $1.15.

Van Zandt, P. C.—*Problems Involved in the Selection of Machinery for the Manufacture of Portland Cement;* [Crushing and grinding equipment; rotary kilns].—Engg. News, Dec.14,1911, p. 700; 6000 w*; 25c.

Weeks, F. D. and E. H. Laws—*Sinter-Roasting with Dwight-Lloyd Machines at Salida, Colo.*—Met. & Cheml. Engg., Feb., 1912, p. 87; 2000 w*; 35c.

ELECTRIC SMELTING

See "Electrometallurgy."

SIDERURGY

See under "Iron and Steels."

Chlorination

Ashcroft, E. A.—*Chlorination Process for Complex Ores;* [Reviews Ashcroft's recent patents].—Met. & Cheml. Engg., Feb.,1912, p. 117; 2000 w*; 35c.

Austin, W. L.—*Leaching Applied to Copper Ore; XV; Electrolysis of Chlorides.*—Mines & Methods, Feb.,1912; p. 403; 5200 w; 20c. Abstracted in Mex. Mng. Jnl., April, 1912; p. 36; 4500 w; 25c.

Brownlee, A. G.—*Importance of the Malm Process in the Metallurgy of Complex Ores;* [Dry chlorination of low-grade ores to recover all the metal values].—Amer. Mng. Congr., Proc., Vol. 14, 1911; p. 168-179. Abstract in Mining & Engg. World. Jan.6. 1912; p. 17; 1600 w; 10c. Also in W. Australian Mng., etc., Jnl., Feb.24,1912; p. 12; 1600 w; 35c.

Abstract in German in Erzbergbau, May 1, p. 156; 1000 w; 35c.

Walton, S. F.—*The Manufacture of Fuming Bi-Chloride of Tin;* [Chlorination process of detinning scrap].—Iowa Engr., Dec., 1911, p. 86; 1000 w; 35c.

———. *The Bradley Process;* [Chlorination extraction of gold, silver and copper from waste copper slimes at Washoe concentrator, Montana].—Mng. Jnl., Apr.6, 1912; p. 326; 1200 w; 35c.

Cyaniding

See Chapter 10.

Amalgamation

See Chapter 10.

Metallurgy: General and Miscellaneous

Alderson, V. C.—*Practical Economies Practiced in Metalliferous Mining and Smelting.*—Colo. School of Mines Mag., June,1912; p. 200; 3600 w; 65c.

Austin, W. L.—*Leaching Applied to Copper Ore XIV: Leaching Without Mining.*—Mines & Methods, Jan.,1912; p. 381; 4600 w; 35c.

Brownlee, A. G.—*Importance of the Malm Process in the Metallurgy of Complex Ores;* [Dry chlorination of low-grade ores to recover all the metal values].—Amer. Mng. Congr., Proc., Vol. 14, 1911; p. 168-179. Abstract in Mining & Engg. World, Jan.6, 1912; p. 17; 1600 w; 10c. Also in W. Australian Mng. etc., Jnl., Feb.24,1912; p. 12; 1500 w; 35c.

German abstract in Erzbergbau, May1, p. 156; 1000 w; 35c.

Bruni, G., and D. Meneghini.—*Bildung metallischer fester Lösungen durch Diffusion im feste Zustande;* [Formation of solid metal solutions by diffusion in the solid condition; copper-nickel, copper-gold, gold-silver].—Internat. Zts. f. Metallogr., Oct., 1911; p. 26-35; 95c.

Cohen, E.—*Neues über die Forclerkrankheit;* [Fatigue and diseases of metals; discussion before Deu. Bunsen Ges.; abstract].—Chemiker Ztg., May30,1912; p. 605; 500 w; 30c.

Friedrich, K.—*Das Metallhüttenmännische Institut der Kgl. Technischen Hochschule zu Breslau;* [The metallurgical department and equipment in the Royal Technical College, Breslau].—Metallurgie, Jan.22,1912, p. 41; Feb.8, p. —; 10,000 w*; 75c.

Haldane, Wm. G.—*The Relation of an Ore Testing Plant to the Mining Industry;* [Read to Colo. Mng. & Metgl. Asso.].—Colo. School of Mines Quar'ly; Jan.,1912; p. 16; 3000 w; 50c.

Hartley, C.—*An Argument for Government Ore-Testing Plants.*—Mng. Sci., May 30,1912; p. 466; 1600 w; 20c.

Jacobs, E.—*Metallurgy in British Columbia in* 1911.—See Brti. Columbia.

Jones, H. C.—*Electrolytic Dissociation and Solvation; Solution and its Importance.*—Franklin Inst. Jnl., March,1912; pp. 217-238; 65c. Abstract in E. & M. J., March 30.1912; p. 653; Apr.6, p. 696; Apr.20, p. 800; 19,000 w; 65c.

Searcy, W. N.—*Federal Investigations of Ore Treatment Problems.*—Amer. Mng. Congr., 1911; Proc., Vol. 14; pp. 196-207.

Reprint in Mining & Engg. World, Nov. 18,1911, p. 1005; 3200 w; 10c.

Theobald, —. *Die Herstellung des Blattmetalls in Altertum und Neuzeit;* [The production of gold foil and metal foil in antiquity and in modern times].—Glaser's Annalen, March1,1912; p. 91-99*; 50c.

Traphagen, F. W.—*The Low-Grade-Ore Problem;* [Read to Colo. Mng. & Metgl. Asso].—Colo. School of Mines Quar'ly, Jan., 1912; p. 10; 1400 w; 50c. Reprint in Mining & Engg. World, March30, p. 722; 10c.

Also abstracted in Spanish in Mex. Mng. Jnl., June,1912; p. 55; 1500 w; 25c.

———. *A New Federal Investigation;* [U. S. Bureau of Mines investigation of elimination of wastes in metallurgy, etc.]. —Mining & Engg. World, Dec.16,1911, p. 1207; 1500 w; 10c.

———. *Metallurgic Experiment Stations and Free Assay Offices;* [Favors government stations, but opposes free chemical assays].—Mining & Engg. World, March9, 1912; p. 545; p. 561; 5000 w; 10c.

———. *Ore Valuation in Recovery Works;* [Problem of tonnages and extraction measurements].—S. Afr. Mng. Jnl., May4,1912; p. 353; 2000 w; 35c.

———. *Research and the Government.* —M. & S. P., March2,1912; p. 331; 1000 w; 15c.

———. *Tagesfragen I; Der gegenwartige Stand des Korrosionsproblems;* [Present day problems; status of the corrosion question].—Internat. Zts. f. Metallogr., April,1912; p. 178-194; 95c.

———. *The New Bessemer Laboratory;* [Ore Dressing and Metallurgy; Imperial College of Science and Technology, London].—Coll'y Guardn., Feb.9,1912; p. 273; 2500 w*; 30c.

Metallography

See also Microstructure of Iron and Steels, Chapter 4.

Bell, Sir Hugh.—*Notes on a Bloom of Roman Iron Found at Corstopitum (Corbridge), Northumberland.*—Iron & Steel Inst., Jnl; May,1912; pp. 13*; 50c. Abstract in Engnrg., May10, p. 640; 3500 w*; 35c. Also in Iron & Coal Trades Rev., May10, p. 733; 3500 w*; 45c.

le Chatelier, H., and W. Broniewski.—*Sur un enregistreur photographique;* [The photographic recording of metal tests, pyrometric points, and other applications in metallurgic arts].—Rev. de Métallurgie, March, 1912; pp. 133-146*; $1.15.

Emich, Fr.—*Lehrbuch der Microchemie;* [Textbook of Microchemistry].—Wiesbaden, 1912; 225 pp.; 30 figs.; $2.25 (book).

Ewing, Sir J. Alfred.—*The Inner Structure of Metals;* [May lecture before British Inst. of Metals].—Engnrg., May17, 1912; p. 651; 4000 w*; 35c.

Friedrich, K.—*Ueber einen Gastiegelofen für metallographische Untersuchungen;* [Gas-burning crucible furnace for metallographic experiments].—Inst. f. Metallographie, etc., an Freiberg; Mittlngn. f. 1910; pp. 44-46*; $3.20.

Giolitti, F.—*Sulla opportunità di introdurre alcune modificazioni nella costruzione del microscopio metallografico di Le Chatelier;* [Modifications in the Le Chatelier metallographic microscope].—Metal'gia Ital., April,1912; pp. 228-230*; 65c.

Gullón, Eduardo.—*Concepto teórico y práctico de la metalografía;* [The theory and practice of metallography; read to Inst. de Ingrs. Civiles, Madrid, Jan.,1912]. —Madrid, 1912; pp. —; (pamphlet).

Guertler, W.—*Die praktische Bedeutung der sogenannten Zustandsdiagramme der Metallegierungen für den Giessereifachman;* [Practical applications of metallography for the alloys-foundryman; read to Ver. Deu. Giessereifachleute. Berlin section].—Giesserei Ztg., March1,1912; p. 137; March15, p. 177; 10,000 w*; 50c.

Gürtler, W.—*Metallographische Nutzanwendung auf die Giessereipraxis;* [The applications of metallography in every-day foundry practice; read to Ver. Deu. Giessereifachleute, Berlin section; abstract].—Zts. f. angew. Chemie, Apr.26,1912; p. 832; 2500 w; 45c.

Hayward, Carl R.—*Apparatus for Metallography.*—Amer. Inst. Mng. Engrs., Bull. 60, Dec.,1911, pp. 973-980; $1.15.

Abstract (grinding and polishing apparatus) in Iron & Coal Trades Rev., April5, p. 527; 750 w*; 35c.

Primrose, J. S. G.—*Micrographic Examination of Failures;* [Read to Glasgow Univ. Engg. Soc.].—Canadian Engr., Feb.8, 1912; p. 280; 2500 w*; 25c.

Rogers, F.—*Notes on the Investigation of Fractures;* ["Sulphur" photographs].—Iron & Steel Inst., Jnl.; May,1912; 10 pp*; 50c. Reprint with discussion in Iron & Coal Trades Rev., May10, p. 724; p. 757; 2500 w*; 35c.

Sauveur, Alb.—*The Universal Metalloscope, A Perfected Microscope for the Examination of Metals.*—Amer. Inst. Mng. Engrs., Bull. 60, Dec.,1911, p. 961-972*; $1.15.

Sexton, A. H., and J. S. G. Primrose.—*The Principles of Iron Founding and Foundry Metallography.*—London, 1912; 338 pp; $2; (book).

Weiller, P. — *Das metallographische Laboratorium im Hüttenbetrieb;* [The metallographic laboratory in smelting works].—Chemiker Ztg., March23.1912; p. 321; March26, p. 332; 6000 w; 50c.

———. *Applied Metallography for the Foundryman;* [From "Eisen Zeitung".]— Castings, Jan..1912, p. 108; 2000 w*; 20c.

———. *The Use of Electricity in the Metallographic Laboratory;* [Illumination of microscopes, etc.].—Iron & Coal Trades Rev., Jan.5,1912, p. 20; 2000 w*; 30c.

Metallurgy: Plating; Coloring

See also under "Zinc" for zinc plating and galvanizing; also under "Tin" for tinplate and de-tinning. See also Electroplating under "Electrometallurgy."

Grothe, A.—*The Shoop Process of Metallization;* [Spray plating process; read to Mex. Inst. of Mng. & Met'l'gy, March11, 1912; abstract].—Mex. Mng. Jnl., May, 1912; p. 38; 1500 w; 25c.

Hartman, F.—*Färben der Metalle;* [The *coloration of metals*.—Vienna, 1912; pp. —; $2.25; (book).

Loppè, F.—*Processo Schoop di Metallizazione;* [The Schoop process of metallization; from Rev. de Métallurgie, Vol. 9, No. 4].—Rassegna Mineraria, Apr.21,1912; p. 231; 1000 w; 35c.

Michel-Rousset, J.—*La Coloration des Métaux; nettoyage, polissage, patinage, oxydation, métallisation, peinture, vernissage;* [Manual of Metal Finishing; scouring, polishing, mirroring, oxidizing, metallizing, painting, glazing].—Paris, 1912; pp. viii, 284*; $1.50; (book).

Sang, M.—*Le zingage du fer et de l'acier;* [Memoir on zinc plating of iron and steel; the various processes].—Rev. de' Mét'l'gie, Jan.,1912; p. 1-31*; Feb., pp. 78-111*; March, pp. 160-186*; May, pp. 343-362*; $4.25.

Schoop, M. U.—*Die Verzinkung nach dem Schoopschen Metallspritzverfahren;* [Zinc plating by the Schoop metallic-spray process].—Chemiker Ztg., Dec.28,1911, p. 1434; 3000 w; 25c.

Schulze, F.—*Ueber Metallzerstäubung durch ultraviolettes Licht;* [Pulverization of metals under the ultra-violet rays].—Berlin

Tech. Hochschule Dissert., 1911; 30 pp*; $1(thesis).

———. *Atomized Metals;* [Chemical Process Co. equipment for atomizing lead, zinc dust, etc.].—Met. & Cheml. Engg., March,1912; p. 180; 1800 w*; 35c.

Metallurgy: Textbooks

Clark, D.—*Australian Mining and Metallurgy.*—Melbourne, 1911; 600 pp*; $6.50 (book).

Fenchel, Ad.—*Metallurgy;* [For manufacturers and foremen in metal trades, dental work, etc., translated into English by H. J. Morris.]—London, 1912; pp. —; (book).

Guillet, L.—*Progrès des mètallurgies de l'aluminium, magnésium, mercure, or et métaux sécondaires;* [Progress in the metallurgy of aluminum, magnesium, mercury, gold, and minor metals].—Soc. d. Ingrs. Civ. France, Bull., Procès-Verbal Dec.1, 1911, pp. —; $1.

Lang, H.—*Metallurgy;* [Vol. I; Chapters on ore crushing, sampling and valuing; roasting; smoke and sulfur fumes of metallurgic works].—N. Y. and London; 1911; 255 pp; $3.00 (book).

Molinié, M., and H. Dietz.—*L'Argent et les Métaux de la Mine de Platine;* [Silver and the platinum metals; their occurrences, metallurgy, and industrial uses].—Paris, 1912; pp. 399; 93 figs.; $2; (book).

Prost, Eug.—*Cours de Métallurgie des Métaux autres que le Fer;* [Treatise on Metallurgy of the Non-Ferric Metals; zinc, lead, silver, gold, copper, tin].—Paris and Liege; 1911; 888 pp*; (book).

Sexton, A. H.—*Elementary Text-Book of Metallurgy.—London,* 1912 (5th edition), pp. ——*; (book).

Weidig, M.—*Metallurgische und Technologische Studien auf dem Gebiete der Legierungs-Industrie;* [Metallurgic and technologic studies in industrial alloys].—Berlin, 1911; pp. —; $2; (book).

C. R.—*Fortschritte auf dem Gebiete der Metallographie;* [Reichert metallographic microscope].—Montanist. Rundschau, Feb.1, 1912; p. 117; 1000 w*; 45c.

Accidents in Metallurgy, etc.

See Accidents, Chapter 9.

Hygiene and Safety in Metallurgy

See Hygiene, etc., Chapter 9.

Assaying and Chemistry.

TEXT BOOKS; GENERAL WORKS

Beckerts, H.—*Die Methoden der Massanalyse; Titriermethoden, Abth.* 2; [The Methods of Quantitative Analysis; Titration, Part 2].—Brunswick, Germany; 1912 (8th edition); pp. —; 111 figs; $3.50 (book).

Clowes, F., and J. B. Coleman.—*Quantitative Chemical Analysis.*—Philadelphia, 1911 (9th edition); pp. 24-565*; $3.50; (book).

Dyson, S. S., and S. S. Clarkson.—*Chemical Works, Their Design, Erection and Equipment.*—London, 1912; pp. 204; 89 figs.; $6; (book).

Emich, Fr.—*Lehrbuch der Microchemie;* [Textbook of Microchemistry].—Wiesbaden, 1912; 225 pp.; 30 figs.; $2.25 (book).

Fulton, C. H.—*A Manual of Fire Assaying.*—New York, 1911 (2d edition); 219 pp.*; $2. (book).

Gutbier, A.—*Anorganische Experimentalchemie im Jahre* 1911; [Review of world's literature on inorganic experimental chemistry, theoretic and applied].—Zts. f. angew. Chemie, March1,1912; p. 385-396; March8, p. 459-468; 20,000 w; $1.

Hill, A. E.—*A Brief Laboratory Guide for Qualitative Analysis.*—Easton, Penn.; 1911; 80 pp.; $1; (book).

Leo, Max.—*Die Anlauffarben; Eine neue Methode zur Untersuchung opaker Erze und Erzgemenge;* [Annealing colors, a new method of examination of opaque ores and ore mixtures].—Dresden, 1911; pp. —; $1; (book).

Lodge, R. W.—*Notes on Assaying and Metallurgical Laboratory Experiments.*—New York, 1911 (3rd edit.); pp. xi, 317*; $3.00 (book).

Lunge, Geo., and E. Berl. (Editors) with numerous collaborators. — *Chemisch-technische Untersuchungsmethoden;* [Chemical-technical testing methods in the chemical industries; Vol I: gases; solid fuels; sulfuric, sulfurous, hydrochloric, and nitric acid industries; alums; soda; chlorine; potash salts; liquid and compressed gases; Vol. II: cyanides; clay and clay products; cement; waste waters; iron; other metals; metal salts; calcium carbide; Vol. III: Fertilizers; explosives; gas manufacture; ammonia; coal tar industry; petroleum and derivatives; Vol. IV: Paints and pigments; mostly organic industries].—Berlin; 1910 and 1911; Vol. 1, 1910; 693 pp.; 163 figs.; 72 plates; $6.50; Vol. II: 885 pp.; 138 figs.; 8 plates; $7; Vol. III: 1911; 1044 pp.; 150 figs.; 24 plates; $7.50; Vol. IV: 1911; 1063 pp.; 56 figs.; 58 plates; $8; (books).

Meurice, Alb.—*Cours d'analyse quantitative des produits des industries chimiques;* [Handbook of quantitative analysis of industrial products; glass; ceramics; acids; aluminum; mineral paints; boric acid; bleaching powders; soda; gas and ammonia manfacture; coal tar; lubricating oil; oil shale; etc.].—Paris, 1912; 480 pp.; 53 figs.; $4; (book).

Neumann, J., and B. Neumann.—*Traité complete d'analyse chimique appliquée aux essais industriels;* [Manuel of Chemical Analysis as Applied to the Testing of Industrial Products; Vol. III, Part 1; Commercial fertilizers, gases; explosives; etc.]. —Paris, 1911; (2d edition, by G. Chenu and M. Pellet); pp. —; 56 figs.; $4; (book).

Samter, V.—*Analytische Schnellmethoden;* [Manual of Short-Cut and Rapid Analytic Methods].—Halle, 1912; 237 pp.; 14 figs.; $4; (book).

Schiffner, C.—*Einführung in die Probierkunde;* [Introduction to assaying].—Halle, 1912; pp. —; $2 (book).

Schimpf, H. W.—*A Systematic Course of Qualitative Chemical Analysis of Inorganic Substances.*—London, 1912 (2d edition); pp. —; $2 (book).

Smith, E. F.—*Electro-Analysis.*—Philadelphia, 1911 (5th edition); 332 pp.; $3; (book).

Urbain, G.—*Introduction à l'Etude de la Spectrochimie;* [Introduction to the Study of Spectrochemistry].—Paris, 1911; pp. iv, 248*; $3 (book).

Wichelhaus, H.—*Vorlesungen über chemische Technologie;* [Lectures on industrial chemistry, Univ. of Berlin; 1: Sodium chloride; 2: Sulphur and compounds; 3: Hydrochloric acid and chlorine; 4, 5, 6: Sodium sulphate, carbonate and hydroxide;

7: Potash salts; 8, 9: Bromine, iodine; 11: Calcium compounds; 12: Ammonia; 13: Nitre; 14: Explosives; 15: Phosphorus; 16: Aluminum; 17: Iron; 18: Gold; 19: Glass; 20: Mortar and cement; 21: Earthenware; 22: Mineral colors; 23: Natural gas, Petroleum and earth 1912 (3d edition); 865 pp.; 200 figs.; $6.50; (book).

LABORATORY AND PROSPECTORS' EQUIPMENT

Benner, R. C.—*An Electric Laboratory Furnace.*—Jnl. of Ind'l & Engg. Chem'y, Jan.,1912, p. 43; 3000 w*; 65c. Abstract in Mining & Engg. World, May18, p. 1051; 2100 w*; 10c.

Christensen, A. O.—*Makeshift Assaying for Prospectors.*—E. & M. J., Dec.23,1911, p. 1233; 2200 w*; 25c.

Marshall, A. E.—*Fused Silica Ware, Its Manufacture, Properties and Uses in the Chemical Industries;* [Read to Amer. Cheml. Soc., N. Y. section; abstract].—Met. & Chemi. Engg., April,1912; p. 218; 1200 w*; 35c.

Merck, E.—*Prüfung der chemischen Reagenzien auf Reinheit;* [The testing of chemical re-agents as to purity].—Darmstadt, 1912 (2d edition); pp. —; $1.50 (book).

Thiel, —. *Zur Verwendung des Edison Akkumulators in der Elektroanalyse;* [Application of Edison storage battery in electro-analysis].—Zts. f. angew. Chemie, Jan. 12,1912; p. 56-59; 75c.

Wheelock, R. T.—*Self-filling Burette Attachment.*—E. & M. J., May25, 1912; p. 1031; 300 w*; 25c.

———. *Deterioration of Platinum Ware;* [From Met. & Cheml. Engg., Dec.,1911].—Mining & Engg. World, March23,1912; p. 666; 2400 w; 10c.

———. *Fours de laboratoire, système du Dr. Heinecke;* [The Heinecke laboratory furnace; from Ton-Industrie Ztg., March10, 1911].—Rev. d. Matériaux, Dec.,1911; p. 208B; 2100 w*; 65c.

PRECIOUS AND RARE METALS AND THEIR ORES

Anderson, A. A.—*Lithium, Its Occurrence, Uses, Determination, and Methods of Extraction.*—Pahasapa, April,1912; p. 11; 2000 w; 65c.
Reprint in Mining & Engg. World, May 18,1912; p. 1055; 2000 w; 10c. Also in Mng. Sci., May23, p. 449; 20c.

Benner, R. C. and M. L. Hartmann.—*Cupellation;* [Comparison of bone-ash and other material as regards silver loss].—Jnl. of Indl. & Engg. Chem'y, Nov.,1911, p. 805; 2000 w; 65c. Abstract in Mining & Engg. World, Feb.3,1912; p. 301; 1000 w; 10c. Also in Mex. Mng. Jnl., March,1912; p. 22; 2000 w; 25c.

Bock, J. C.—*Removing Fusions from Crucibles;* [from the Chemist-Analyst].—M. & S. P., May18,1912; p. 700; 300 w; 20c.

Caldecott, W. A.—*Chemistry of Banket Ore Treatment.*—See under Transvaal.

Danne, J.—*Le laboratoire d'essais des substances radioactives à Gif, Seine-et-Loire;* [The testing laboratory for radioactive materials at Gif, France].—Génie Civil, Feb.24,1912; p. 321; 5000 w*; 50c.

Dart, A. C.—*Assay of Ores Containing the Platinum Group of Metals;* [at Rambler mine, Wyoming].—Met. & Cheml. Engg., April,1912; p. 219; 700 w; 35c. Reprint in Mining & Engg. World, July13, p. 57; 10c.

Dewey, F. P.—*Cadmium and Nickel in Cyanide Bullion;* [Erratic mint assays, and causes].—E. & M. J., Apr.13,1912; p. 733; 1000 w; table; 25c.

Dewey, F. P.—*Direct Determination of Small Amounts of Platinum in Ores and Bullion.*—Amer. Inst. Mng. Engrs., Bull. 64, April,1912; pp. 439-442; $1.15. Abstract in E. & M. J., March9, p. 519; 800 w; 25c. March21, p. 274; 1500 w; 20c. Also in Jnl. of Indl. & Engg. Chem'y, April,1912; p. 257; 1500 w; 65c. Also in M. & S. P., July20, p. 87; 750 w; 20c.

Ebler, E.—*Ueber die Bestimmung des Radiums in Mineralien und in Gesteinen;* [The estimation of radium in minerals and rocks; read to Deu. Bunsen Ges.; abstract].—Chemiker Ztg., May30,1912; p. 604; 500 w; 30c.

French, H.—*Congress Continues the Mints and Assay Offices;* [Reviews unsuccessful movement to close western and southern mint and assay offices].—Mining & Engg. World, June8,1912; p. 1193; 2500 w; 10c.

Friedrich, K.—*Zur Quantitätive Bestimmung minimaler Mengen von Silber und Gold;* [Quantitative estimation of minute quantities of gold and silver].—Inst. f. Metallographie & Probierkunde an Freiberg, Mittlngn. f. 1910; pp. 68-72; $3.20.

Gibson, W. L.—*Assay of Zinc Box Precipitates.*—Mining & Engg. World, Apr.27, 1912; p. 930; 400 w; 10c.

Hall, E. J.—*The Niter Assay.*—E. & M. J., Feb.17,1912; p. 347; 750 w*; 25c. Abstract in Mining & Engg. World, March23, p. 666; 500 w; 10c.

Hauser, O. and A. Lowitz.—*Ueber die Hydroscle der Niobsäure und der Tantalsäure und die Trennung des Niobs und Tantals nach Weiss-Landecker;* [The aqueous solutions of niobic and tantalic acids and the separation of niobium and tantalum after Weiss-Landecker].—Zts. f. angew. Chemie, Jan.19,1912; p. 100; 2000 w; 40c.

Henrich and Glaser.—*Ueber die gebräuchlichen Apparate zur Bestimmung der Radioaktivität von Quellen;* [Necessary apparatus for determining the radioactivity of springs].—Zts. f. angew. Chemie, Jan.5, 1912; p. 16-19; 75c.

Johnston, A. McA.—*Assaying.*—See Caldecott's "Rand Metallurgic Practice," under Transvaal.

Johnston, A. McA.—*On Testing; Cyanide Solutions, Supplies, Gold Ore, and Testing a Plant in Operation.*—See Caldecott's "Rand Metallurgic Practice," under Transvaal.

Kern, Edw. F., and A. Heimrod.—*The Determination of Gold and Silver in Copper Bullion.*—Met'g'l & Cheml. Engg., Oct., 1911, p. 496; 3100 w; 35c. Abstract in Mining & Engg. World, Jan.13,1912, p. 74; 2000 w; 10c.

Layng, H. R.—*Method for Assaying Zinc-Box Precipitate.*—Mining & Engg. World, March23,1912; p. 659; 2100 w*; 10c.

Liddell, D. M.—*The Assay of Copper Bullion.*—E. & M. J., Dec.23,1911, p. 1213; 650 w; 25c.

Middleton, G.—*Practice at the Canadian Assay Office at Vancouver.*—Mining & Engg. World, Jan.13,1912, p. 64; 500 w; 10c.

Salas, L. E.—*A Modification of the Gay-Lussac Method for Silver-Bullion Containing Tin.*—Amer. Inst. Mng. Engrs.. Bull 63; March,1912; pp. 267-278; $1.15.

Trenkner, —. *Die quantitätive Bestimmung der Edelmetalle Gold, Silber, Platin;* [Quantitative estimation of gold, silver, platinum].—Metallurgie, Feb.8,1912; p. 103; 1500 w; 50c.

Wilson, P. D.—*Notes on the Assay of Sulphide Ores* [of gold or silver; also furnace products].—Mex. Mng. Jnl., May,1912; p. 27; 2000 w*; 25c.

———. *Method of Detecting Gold Where Values Are Low.*—Mining & Engg. World, Jan.6,1912; p. 16; 400 w; 10c.

———. *U. S. Assay Offices; Methods of Operation.*—Mining & Engg. World, Feb.24, 1912; p. 461; 3000 w; 10c. Reprint in Los Angeles Mng. Rev., March9,1912; p. 5; 3000 w; 20c.

BASE METALS; METALLOIDS

For chemistry of iron and steels, see under "Iron and Steels," Part II of Index.

Alder, A.—*Tin Occurrences in the Black Hills, and Methods of Analysis.*—Pahasapa, June,1912; pp. 22-27; 65c.

Bolis, A.—*Quantitative Bestimmung von Kupfer in Kupfersulfat;* [Quantitative estimation of copper in copper sulphate; abstract from Gazt. Chimica Ital., 1911, No. 2, p. 374].—Zts. f. angew. Chemie, March1, 1912; p. 426; 200 w; 45c.

Brasseur, —. *Dosage du fluor dans les minerais sulfurés;* [Estimation of fluorine in sulfide ores, notably in blende and pyrite containing less than 0.01% fluorine].—Phosphate, Dec.25,1911, p. 995; 500 w; 35c.

Cain, J. R., and J. C. Hostetter.—*A Rapid Method for the Determination of Vanadium in Steels, Ores, etc., based on its Quantitative Inclusion by the Phospho-Molybdate Precipitate.*—Jnl. of Ind'l & Engg. Chem'y, April,1912; p. 250; 6000 w*; 65c.

Chase, T.—*Iodide Method of Copper Assay.*—Mines & Minerals, June,1912; p. 684; 1400 w; 35c. Also in Salt Lake Mng. Rev., June30, p. 24; 1400 w; 25c.

Davis, R. S.—*Method of Analysis for Wulfenite Ores and Ferro-Boron.*—Mining & Engg. World, June1,1912; p. 1137; 1200 w; 10c.

Delbarre, F.—*Etude sur les méthodes de récherche et de dosage du vanadium;* [Study of the various methods of detecting and estimating vanadium].—Bull. Techniq. du Nord, Feb.-March, 1912; p. 25-35; 4000 w; 75c.

Fairchild, J. G.—*Some New Features in the Electrolytic Determination of Lead;* [From Jnl. of Ind'l & Engg. Chem'y, Dec., 1911].—Mng. Sci., May9,1912; p. 408; 700 w; 20c.

French, A. T.—*Quick Combination Methods in Smelter Assays.*—Instn. of Mng. & Met'gy, Bull. 89, Feb.,1912; pp. 1-18; 50c.

Abstract in M. & S. P., March16, p. 408; 2200 w; 20c. Also in Mining & Engg. World, June8, p. 1143; 5000 w; 10c. Also in E. & M. J., June8, p. 273; 1800 w; 35c. Also in Queensland Govt. Mng. Jnl., June, p. 273; 1800 w; 35c.

Abstract in Spanish in Mex. Mng. Jnl., Aug., p. 55; 4400 w; 25c.

Gutbier, A.—*Fortschritte auf dem Gebiete der analytischen Chemie der Metalloide im Jahre,* 1911; [Review of progress in analytic chemistry of the metalloids in 1911].—Chemiker Ztg., Jan.13,1912, p. 53; Jan.18, p. 66; Jan.25, p. 94; 6500 w; 65c.

Hall, E. J.—*New Kink in Iodide Assay.*—E. & M. J., June15,1912; p. 1166; 1000 w; 25c.

Heath, G. L.—*The Estimation of Oxygen and Occluded Gases in Copper, and a Correction to the Electrolytic Assay in the Complete Analysis of Copper.*—Jnl. of Ind'l & Engg. Chem'y, June,1912; p. 402; 2500 w; 65c.

Ivanov, W. N.—*Ein einfacher Apparat zur Bestimmung kleiner Mengen von Arsen;* [Simple apparatus for determination of small amounts of arsenic].—Chemiker Ztg., Jan.9,1912, p. 31; 500 w; 30c.

Jamieson, G. S.—*New Volumetric Method for the Determination of Mercury.*—Amer. Jnl. of Sci., April,1912; pp. 349-352; 1000 w; 65c.

Kantschew, K.—*Eine kritische Untersuchung auf dem Gebiete der Wolfram- und Wolframchromverbindungen;* [New titration method, and critical notes on, analysis of tungsten and tungsten-chrome compounds; brief abstract of paper read to 2d. Mendeléyevf Congress, St. Petersburg, Dec., 1911].—Chemiker Ztg., Feb.20,1912; p. 198; 250 w; 25c.

Kendall, E. C.—*Determination of Copper by a Modification of the Iodide Method;* [from Amer. Chem'l. Soc., Jnl., Dec.,1911].—M. & S. P., Dec.30.1911, p. 838; 1500 w; 20c. Also in Chem'l. Engr., Jan.,1912, p. 31; 2600 w; 35c. Also in Mining & Engg. World, Feb.17, p. 409; 2000 w; 10c.

Lewis, E. A. —*Limits of Accuracy in Copper and Brass Analysis.*—Soc. of Chem'l Ind'y, Jnl.; Feb.15,1912; p. 96; 1200 w; 65c.

List, E.—*Electrolytic Determination of Lead;* [Guess-Haultain equipment at St. Louis].—Met. & Chem'l. Engg., March, 1912; p. 135; 750 w; 35c.

McNair, S. S.—*Determination of Sulphur in Sulphide Ores.*—E. & M. J., March16, 1912; p. 536; 350 w; 25c.

Morgan, R. G.—*Estimation of Tin in an Ore;* [read to Australasian Inst. of Mng. Engrs.; abstract].—Chem'l. Engr., July, 1911, p. 289; 1500 w; 35c. Also in Mng. Sci., Aug.17, p. 150; 1500 w; 20c. Also in Mining & Engg. World, Oct.14, p. 757; 1500 w; 10c. Also in Chem'l. Met. & Mng. Soc. of S. Afr., Jnl., Nov.,1911, p. 135; 1200 w; 90c.

Nitchie, C. C.—*A Rapid Method for the Determination of Sulfur in Roasted Blende.*—Jnl. of Ind'l & Engg. Chem'y, Jan.,1912, p. 30; 2400 w*; 65c. Abstract in Mining & Engg. World, Feb.10,1912, p. 340; 2100 w*; 10c.

Norlin, E.—*Method för analys af hvitmetaller;* [Methods of analysis of white metal, lead-antimony alloys].—Jernkontor. Annaler, Bihang; Feb.15,1912; pp. 91-112*; 45c.

Orthey, M.—*Bestimmung des Kohlenstoffs im Nickel;* [Estimation of carbon in commercial nickell.—Giesserei Ztg., Apr.15, 1912; p. 237; 2000 w; 40c.

Popper, Edw.—*New Kink in Iodide Copper Assays.*—E. & M. J., May25,1912; p. 1021; 500 w; 25c.

Price, W. B., and R. K. Meade.—*The Technical Analysis of Brass and the Non-Ferrous Alloys.*—London, 1911; pp. —; $2.75; (book).

Quinney, E. H.—*Tungsten in the Black Hills. and Methods for its Determination;* [From S. Dak. School of Mines Quarterly].—Mng. Sci., Jan.18.1912, p. 45; 1300 w; 20c. Also in Mining & Engg. World, July 13, p. 54; 1500 w; 10c.

Sale, A. J.—*Accurate "Slop-Coppers."*—M. & S. P., Jan.27,1912; p. 165; 1000 w; 20c.

Sharwood, W. J.—*Analysis of Commercial Zinc Dust.*—See under Cyaniding, Chapter 10.

Tarugi, N.—*Sulla ricerca dell'antimonia;* [Notes on the test for antimony].—Soc. Chim. Ital., R-C; Vol. III, No. 11, p. 319.

Abstract in Rassegna Mineraria, Dec.11, 1911, p. 279; 500 w; 35c.

Taylor, F. O., and others.—*Bibliography on Methods of Estimation of Zinc*, 1890-1911.—Jnl. of Ind'l & Engg. Chem'y, June 1912; pp. 468-469; 65c.

Turrentine, J. W.—*Note on the Determination of Iodides by Direct Titration.*—Jnl. of Ind'l & Engg. Chem'y, June,1912; p. 435; 1500 w*; 65c.

Voigt, Dr.—*Rapid Determination of Zinc Ores.*—Mng. Jnl., Feb.17,1912; p. 178; 1200 w; 35c. Also in Mng. Sci., Apr.11, p. 330; 1000 w; 20c. Also in Mex. Mng. Jnl., June, p. 43; 1000 w; 25c. Also in Mining & Engg. World, July20, p. 112; 450 w; 10c.

Ward, H. L.—*Oxalate-Permanganate Process for the Determination of Copper Associated with Cadmium, Arsenic, Iron or Lead.*—Amer. Jnl. of Sci., May,1912; p. 423-433; 65c.

Ward, H. L.—*Estimation of Lead, Nickel and Zinc by Precipitation as Oxalates and Titration with Potassium Permanganate.*—Amer. Jnl. of Sci., April,1912; p. 334-339; 1500 w; 65c.

Windisch, R.—*Ueber quantitative Kupferbestimmung mittels unterphosphoriger Säure bezw. Natriumhypophosphit;* [The Dallimore process of quantitative estimation of copper in sulphates by means of hypophosphites, especially sodium hypophosphite; read to Ungar. Naturw. Ver., chemisch-mineralog. section, Feb.,1912; brief abstract in] Chemiker Ztg., May28,1912; p. 596; 100 w; 35c.

Wogrinz, A., and J. Kittel.—*Ueber die Bestimmung von Borsäure in Nickelbädern;* [Estimation of borates in electrolytic nickel baths].—Chemiker Ztg., Apr.18,1912; p. 433; 2500 w; 35c.

Wolciechowski, B.—*The Electrolytic Determination of Lead in Large and Small Amounts, Using a Gauze Cylinder Anode.*—Met. & Cheml. Engg., Feb.,1912, p. 108; 750 w; 35c.

———. *Metallic Zinc in Zinc Dust;* [Methods of Determination].—E. & M. J., Jan.20,1912, p. 165; 600 w*; 25c.

NON-METALS

See also Coals, Petroleum, By-Products, Asphalts, Fertilizers, Cements, etc., Chapters 6 and 7.

Bidtel, E.—*Valuation of Fluorspar;* [Practice in commercial analysis].—Jnl. of Ind'l & Engg. Chem'y, March,1912; p. 201; 1800 w; 30c.

Borck, H.—*Einige Erfahrungen aus der Laboratoriumspraxis über Eisen- und Aluminiumsbestimmungen;* [Some laboratory experiences in determination and estimation of iron and alumina].—Zts. f. angew. Chemie, April12,1912; p. 719; 1000 w; 35c.

Crisfield, J. A. P.—*Determination of Moisture in Fuel;* [Abstract from Franklin Inst. Jnl.].—Coal Age, Jan.23,1912, p. 443; 1700 w; 20c. Also in Mining & Engg. World, Jan.13, p. 70; 1900 w*; 10c.

Davis, C., and J. L. Foucar.—*A Rapid Volumetric Method for the Estimation of Free Sulphur;* [Especially tars and spent oxides from gas works].—Soc. of Cheml. Ind'y, Jnl.; Feb.15,1912; p. 100; 500 w*; 65c.

Dede, L.—*Zur Analyse des gebrannten Magnesits;* [The analysis of commercial burned magnesite].—Chemiker Ztg., Apr.13, 1912; p. 414; 1000 w; 30c.

Duisberg, —. *Die Wissenschaft und Technik in der Chemischen Industrie mit besonderer Berücksichtigung der Teerfarbenindustrie;* [Science and technique in the chemical industries with special reference to coal-tar dyes].—Ztg. f. angew. Chemie, Jan.5,1912, p. 3-14; 75c.

Epstein, F., and Polonyi, H.—*Zur Untersuchung von Paraffin;* [The sampling and testing of paraffin].—Petroleum, March6, 1912; p. 594; 1500 w; 45c.

Ferla, A.—*Nouvel appareil pour l'analyse de tous charbons ou combustibles au point de vue de leurs sous produits;* [New apparatus for analyzing coals or fuels with respect to their recoverable by-products].—Rev. Polytechniq., 1911, No. 288, pp. 154-158*; 75c.

Finch, Geo.—*Die massanalytische Bestimmung von Schwefel-, Salpeter-, und Salpetrigsäure in Misch- und Abfallsäuren;* [Quantitative estimation of sulphuric, nitric and nitrous acids in mixtures and wastes].—Ztg. f. Sprengstoffw., March15,1912; p. 113; 2000 w; 35c.

Fortini, V.—*Beitrag zur Bestimmung der Magnesia in Magnesiumcarbonat und in seinen Gemischen mit Asbest;* [Calorimetric estimation of magnesia in magnesium carbonate and in asbestos mixtures].—Chemiker Ztg., March9,1912; p. 270; 500 w; 25c. 2200 w; 20c.

Fulweiler, W. H.—*Determination of Free Carbon in Bituminous Compounds by a Centrifugal Method;* [Read to Amer. Asso. f. Adv. of Sci.].—Engg. & Contractg., Jan.31, 1912; p. 122; 750 w; 25c.

Gavelle, P.—*Contribution à l'étude de l'analyse des superphosphates;* [Analytic methods for superphosphates; sampling, water solubility, and water-citrate solubility].—Phosphate, Jan.8,1912; p. 34; 1500 w; 35c.

Groebl, A.—*Ueber die Salpetersäurebestimmung nach Pelouze-Fresenius;* [The Pelouze-Fresenius process for estimation of nitrates].—München Techn. Hochschule Dissert., 1911; 52 pp; $1 (thesis).

Gwiggner, A.—*Zur Teerbestimmung im Generatorgas;* [Tar estimation in producer-gas].—Chemiker Ztg., Apr.25,1912; p. 461; 1000 w*; 35c.

Klason, P., and H. Mellquist.—*Jodometrische Methode zur quantitativen Bestimmung kleiner Mengen Selen in Schwefel und Kiesen;* [Iodometric methods of estimating small quantitities of selenium in sulphur or in pyrites].—Zts. f. angew. Chemie, March 15,1912; p. 514; 4000 w*; 50c. Abstract in Chemiker Ztg., Dec.5,1911, p. 1345; 500 w; 30c.

French abstract in Rev. de Mét'l'gie, March,1912; p. 102; 300 w; $1.15.

Lathe, F. E.—*Copper Determinations at Granby Smelter, B. C.*—E. & M. J., Junel, 1912; p. 1071; 3000 w; 25c.

Klein, Fred.—*Rapid Determination of Sulfuric Acid with the Porous Clay Crucible;* [From Amer. Jnl. of Pharmacy].—Cheml. Engr., Jan.,1912, p. 39; 1000 w*; 35c.

Lessing, R.—*A New Apparatus for the Coking Test of Coals.*—Soc. of Chem'l Ind'y, May31,1912; pp. 465-468*; 65c.

Loebell, H.—*Zur Untersuchung von Asphalten;* [The examination of asphalts].—Chemiker Ztg., Jan.2,1912; p. 4; Jan.6, p. 22; 4200 w; 50c.

Lücker, F.—*Eine neue Methode der Phosphorsäurebestimmung;* [New modification of the Lorenz molybdenum process of phosphate analysis; read to Niederrhein. Ges. f. Natur- & Heilkunde Bonn, Dec.,1911; brief

abstract in] Chemiker Ztg., March7,1912; p. 260; 100 w; 25c.

Meade, R. K.—*Portland Cement; Its Composition, Raw Materials, Manufacture, Testing and Analysis.*—Easton, Penn.; 1911 (2d edition); 512 pp*; $4.50 (book).

Neumann, R.—*Eine Vereinfachung bei der Stickstoff-Bestimmung;* [Simplification of nitrogen estimation].—Chemiker Ztg., Junel,1912; p. 613; 2000 w; 35c.

Parr, S. W.—*The Causes for Variation in Volatile Matter Determinations.*—Cheml. Engr., May,1912; p. 212; 2000 w; 35c.

Patten, A. J., and C. S. Robinson.—*Neutral Ammonium Citrate Solution;* [For determining available phosphoric acid].—Jnl. of Ind'l & Engg. Chem'y, June,1912; p. 443; 2000 w*; 65c.

Rupp, E.—*Ueber einen Kohlensäure Bestimmungs Apparat;* [Simplified apparatus for estimating Co_2 in carbonates].—Chemiker Ztg., Jan.16,1912, p. 59; 500 w*; 35c.

Sanchez, J. A.—*Nuevo metodo para la determinacion volumetrica de los carbonatos de sodio y de potasio en las aguas potables y minerales;* [New volumetric method for the estimation of sodium and potash carbonates in potable and in mineral waters].—Soc. Cient. Argentina, Anales; Oct.,1911; pp. 176-182; $1.15.

Sansone, A.—*Kompendium der Färberei Chemie auf wissenschaftlicher und praktischer Grundlage;* [Compendium of paint and pigment chemistry on the scientific and practical foundations].—Vienna and Leipzig, 1912; 326 pp.; 67 figs.; $4.50; (book).

Schollenberger, C. J.—*Determination of Total Potassium in Minerals.*—Jnl. of Ind'l & Engg. Chem'y, June,1912; p. 436; 500 w*; 65c.

Schwarz, F.—*Verfahren zur Bestimmung des Asphaltgehalts von Mineralölen, Erdölpechen, etc.;* [Process of estimating asphalt content of petroleum, oil pitches, etc.].—Chemiker Ztg., Dec.23,1911, p. 1417; 3000 w; 35c.

Stansfield, Edg.—*Coals of Canada,* by J. B. Porter and others; *Part 8, Work of the Chemical Laboratory;* [Sampling, analytic methods, and analyses of Canadian coals].—Canada Dept. Mines, Mines Branch Report No. 83; 1912; Vol.2; pp. 121-184*; tables; $1.25.

Stanton, F. M. and A. C. Fieldner.—*Methods of Analyzing Coal and Coke.*—U. S. Bur. Mines, Technical Paper No. 8; 1912; 21 pp*; 10c.

Abstract in Mng. Sci., March28, p. 289; April4, p. 309; 4000 w; 30c. Also in Chem'l Engr., April, p. 150; 6000 w*; 35c. Also in Mining & Engg. World, May25, p. 1101; 3600 w; 10c.

Surr, G.—*Some Difficulties in the Analysis of Gypsum.*—Mining & Engg. World, Feb.24,1912; p. 467; 800 w; 10c.

Surr, G.—*The Estimation of Potassium as Perchlorate.*—Mining & Engg. World, March16,1912; p. 605; 2200 w; 10c.

Taylor, C. M., and others.—*Standard Analysis for Chloride of Zinc for Wood Preserving Purposes.*—Amer. Wood Preservers' Asso., Proc; 1912; pp. 230-235; $2.

Weinstein, —. *Die Herstellung und Untersuchung der im Eisenbahnbetriebe verwendeten Petroleumprodukte;* [Production and testing of the petroleum products used in railroading].—Glaser's Annalen d. Gewerbe, May15,1912; pp. 181-184; 75c.

Wiley, C. N. and W. A. Ernst.—*Scheme for the Rapid Analysis of Cement.*—Jnl. of Ind'l & Engg. Chem'y, Aug.,1911, p. 551; 1800 w*; 65c.

Abstract in Mining & Engg. World, Oct. 28, p. 865; 1300 w; 10c. Also in Cement, November,1911, p. 190; 1300 w; 30c.

American Chemical Society.—*Committee Reports on Fertilizer Legislation, Potash and Phosphate Analysis.*—Jnl. of Indl. & Engg. Chem'y, March,1912; pp. 223-225; 65c.

———. *Die Untersuchung von Giessereikoks;* [The testing and examination of foundry coke].—Eisen Ztg., May4,1912; p. 311; May11, p. 331; 2500 w; 50c.

———. *Kalisalzanalysen;* [Notes on analysis of potash salts].—Zentralbl. f. Kunstdünger-Ind., Dec.7,1911, p. 392; 500 w; 35c.

———. *Nevada Potash Laboratory;* [Bureau of Soils-Geol. Survey laboratory at Reno].—Amer. Fertilizer, March23,1912; p. 35; 1400 w; 25c.

———. *Some Methods of Analysis Used in the Laboratories of the Armour Institute of Technology;* [Limestone, cement].—Cheml. Engr., Apr.,1912; p. 148; 1800 w*; 35c.

———. *The Reno Co-Operative Potash Laboratory;* [U. S. Dept. of Agriculture plant at Mackay School of Mines for testing supposed potashes].—M. & S. P., March 2,1912; p. 346; 1100 w; 15c.

———. *The Technical Analysis of Fuel* [Coal].—Cheml. Engg., Jan.,1912; p. 392; Feb., p. —; 5000 w; 75c.

GASES AND LIQUIDS

Bowser, L. T.—*Carbon Dioxide; its Volumetric Determination;* [New apparatus].—Jnl. of Ind'l & Engg. Chem'y, March, 1912; p. 203; 2500 w*; 65c.

Burrell, G. A.—*Characteristics of the Natural Gas Used at Pittsburgh;* [For artificial explosions in government experimental gallery; with notes on analytic methods].—U. S. Bur. Mines, Bull. No. 15; 1912; pp. 63-77; 10c.

Burrell, G. A.—*New Forms of Gas Analysis Apparatus;* [Mine gases; instruments of U. S. Bureau of Mines; read to Amer. Cheml. Soc.; abstract].—Coal & Coke Op., Jan.25,1912, p. 49; 2200 w*; 25c. Also in Jnl. of Ind'l & Engg. Chem'y, April, p. 297; 3000 w*; 65c. Also in Mines & Methods, May, p. 480; 6000 w*; 20c.

Gill, A. H.—*Gas and Fuel Analysis for Engineers.*—New York, 1911 (6th edition); 139 pp*; $1.25 (book).

Haldane, J. S.—*Methods of Air Analysis;* [Chiefly mine airs].—London, 1912; pp. —; $1.75; (book).

Editorial review and discussion in Coll'y Guardn., Apr.26,1912; p. 845; 1500 w; 35c.

Hassenstein, W.—*Kontrolle von Generatorgas-Analysen;* [Control of tests and analyses of producer gas].—Chemiker Ztg., Apr.2,1912; p. 537; 2000 w; 30c.

Johannsen, O.—*Ueber Staubbestimmung in Gichtgas;* [Estimation of dust in flue gases; report of chemical committee of Ver. Deu. Eisenhüttenleute].—Stahl & Eisen, Jan.4,1912; p. 16; 2500 w; 75c.

Picard, M.—*Ueber Nachweis und Bestimmung kleiner Mengen Kohlenoxyd;* [Detection and estimation of small amounts of CO].—München Techn. Hochschule, Dissert. 1911; 69 pp.; $1 (Thesis).

Williams, F. M.—*New Forms of Apparatus for Gas Analysis.*—Jnl. of Ind'l & Engg. Chem'y, May,1912; p. 380; 1000 w*; 65c. Also in Met. & Cheml. Engg., June, 1912; p. 382; 1000 w*; 35c.

CHEMICAL COMPUTATIONS

Crudo, E., and A. Lotti.—*I limiti di approssimazione nelle analisi chimiche;* [The limits of error and approximation in industrial analytic chemistry].—Rassegna Mineraria, March11,1912; p. 148; 3000 w; 35c.

Durant, H. T.—*Standardization in Assays;* [Weights].—Mng. Mag., Dec.,1911, p. 434; 750 w; 35c.

Fischer, Ferd.—*Chemisch-technologisches Rechnen;* [Chemico-technologic computations].—Leipzig, 1911; 117 pp.; $1.25; (book).

Holloway, G. T.—*Notes on the Valuation of Ores and Minerals, and on Metallurgical Calculations.*—Instn. of Mng. & Met'l'gy, Bull. 90; March,1912; pp. 16; chart; 50c.

Jänecke, E. and F. Hoffmann.—*Ueber Gewichts- und Molekül- oder Atom-Prozente in 2- und 3-Stoffsystemen;* [Computation of specific gravity from molecular and atomic weights in binary and tertiary chemical combinations].—Metallurgie, May 22,1912; p. 320-327*; 50c.

Mead, W. J.—*Some Geological Short Cuts;* [Slide-rule and chart devices for conversion of rock analyses into terms of minerals].—Econ. Geol'y, Feb.-March,1912; pp. 136-144*; 65c.

Molar, C.—*Sugli errori inevitabili dell'analisi quantitativa;* [The unavoidable errors in quantitative analysis].—Rassegna Mineraria, Feb.21,1912; pp. 101-111; 9000 w; 35c.

Stewart, J. B.—*Presenting Assay Results by Graphic Methods.*—M. & S. P., May11, 1912; p. 654; 3500 w; 20c.

Wilson, F. B.—*Methods of Balancing Chemical Reaction Equations.*—Met. & Cheml. Engg., Feb.,1912, p. 94; 1800 w; 35c.

GENERAL AND MISCELLANEOUS

Florence, W.—*Producçao de crystaes microscopicos nas perolas do Maçarico;* [Production of microscopic crystals in blowpipe beads].—Escola de Minas Ouro Preto, Brazil; Annaes: No. 12, 1911; pp. 1-50*; $1.50.

Jones, H. C.—*The Theory of Solution.*—Franklin Inst. Jnl., March,1912; pp. 217-238; 65c. Also in E. & M. J., March30, p. 653; Apr.6, p. 696; Apr.20, p. 800; 19,600 w; 65c.

Jones, H. C.—*Mass Action and Reaction Velocity* [In reduction of oxides, etc.].—E. & M. J., June1,1912; p. 1087; 3600 w; 25c.

Kallauner, O., and I. Preller.—*Ueber die Trennung des Calciums vom Magnesium;* [Separation of calcium from magnesium].—Chemiker Ztg., Apr.23,1912; p. 449; Apr.25, p. 462; 5000 w; 50c.

Surr, G.—*Some Methods of Separating Aluminum from Iron.*—Mining & Engg. World, Apr.27,1912; p. 913; 2400 w; 10c.

———. *Metallurgic Experiment Stations and Free Assay Offices;* [Favors government stations, but opposes free chemical assays].—Mining & Engg. World, March9, 1912; p. 545; p. 561; 5000 w; 10c.

SAMPLING

For the sampling of placer deposits, see also nder Prospecting and under Dredging, Chapter 8.

Bancroft, Geo. J.—*A Simple Crusher for Samplers.*—Mng. Mag., March,1912; p. 211; 800 w*; 35c.

Bauer, O., and E. Deiss.—*Probenahme und Analyse von Eisen und Stahl;* [The sampling and analysis of iron and steel].—Berlin, 1912; pp. 258; 128 figs; $3 (book).

Breth, F.—*Ueber den Einfluss der Probenahme auf die Bestimmung des Stockpunktes von Paraffin;* [Significance of proper sampling in determining the value of paraffine for candle-making].—Petroleum, Nov. 1,1911, p. 106; 500 w; 45c.

Brown, J. C.—*Some Factors Governing the Accurate Valuation and Successful Exploitation of Gold-Bearing Alluvials in India.*—Mng. Geol. Inst. of India; Trans; Jan.,1912; pp. 209-212; $2.50.

Abstract in London Mng. Jnl., May4, p. 452; 500 w; 35c. Also in Mining & Engg. World, May25, p. 1100; 1000 w; 10c.

Denis, T. C., E. Stansfield, and J. B. Porter.—*Collecting Coal Samples, and Sampling in the Testing Plant and Laboratory.*—Canada Dept. Mines, Mines Branch Report No. 83; 1912; pp. 129-162*; $1.25.

Dennis, F. J.—*Examination of Dredging Properties.*—Amer. Inst. Mng. Engrs., Bull. 64; Apr., 1912; pp. 407-410; $1.15.

Abstract in Mng. Sci., May9, p. 411; 1600 w; 20c. Also in Mex. Mng. Jnl., June, 1912; p. 41; 1600 w; 25c.

Hazard, F. H.—*Device for Splitting Pulp Samples;* [Or other wet samples of fine ore].—E. & M. J., Jan.13,1912, p. 109; 750 w*; 25c.

James, Geo. A.—*The "Salting" of Samples and Means of Detection.*—Mining & Engg. World, May25,1912; p. 1099; 2200 w; 10c.

Keller, Edw.—*The Mathematics of Copper Sampling.*—E. & M. J., Apr.6,1912; p. 703; 3000 w; 25c.

Lang, H.—*Metallurgy;* [Vol. I, includes chapter on ore sampling].—N. Y. and London; 1911; 255 pp; $3.00 (book).

Liddell, D. M.—*Sampling Errors Due to Copper Bar Shapes.*—E. & M. J., Dec.16, 1911; p. 117; 1000 w*; 25c. Abstract in Mining & Engg. World, Feb.10,1912; p. 361; 800 w*; 10c.

Miller, E. W.—*A Sample Reducing Machine;* [Coal and ore mixer and crusher for U. S. Bureau of Mines].—E. & M. J., March2,1912, p. 444; 500 w*; 25c.

Morineau, —. *Nouvelle Méthode de sondage des alluvions par le vide;* [Morineau vacuum process for drilling and sampling prospect holes in placer deposits].—Rev. Noire, Jan.7,1912, p. 10; 1400 w; 35c.

Moss, R. S. and E. G. Bailey.—*Trenches Preferred in Sampling Coal.*—Black Diamond, Jan.13,1912; p. 21; 1200 w; 30c.

Platt, Jas. M.—*A Graphic Method for Facilitating Valuation of Ore Reserves;* [Calculations for irregular sampling].—Mex. Instn. Mng. & Met'l'gy, Trans.; Vol. 2, No. 6; 1912; pp. 220; 750 w*; 75c.

Rice, C. T.—*Grab Sampling in Stopes;* [From Engg. & Mng. Jnl.].—Queensl. Govt. Mng. Jnl., Jan.,1912; p. 7; 750 w; 35c.

Rzehulka, A.—*Die Probenahme für die Bewertung von Erzen;* [The methods of ore sampling for determining values].—Montanist. Rundschau, Apr.16,1912; p. 354; 3000 w; 45c.

English translation in London Mng. Jnl., June29, p. 668; 2800 w; 35c.

Schäfer, W. and E. Corleis.—*Ueber die Probenahme von Rohstoffen und Zwischenerzeugnissen auf den Hüttenwerken;* [Sampling of raw materials and intermediate products at smelters; report of committee of chemists of Ver. Deu. Einsenhüttenleute].—Stahl & Eisen, Jan.11,1912; p. 53-58; 5000 w; 75c.

Shaw, S. F.—*Mine Sampling;* [System at

Montezuma gold mines, Costa Rica].—Mng. Mag., Dec.,1911, p. 457; 1000 w*; 35c.

Singer, Leopold.—*Die Lieferungsbedingungen der Regierung der Vereinigten Staaten für den Kauf von Heizöl und Anleitungen zur Probenahme von Oel und Naturgas;* [Review of I. C. Allen's bulletin on: "Specifications for the purchase of fuel oil for the U. S. government, and directions for sampling oil and natural gas: U. S. Bur. Mines, Techn. Paper 3].—Petroleum, Nov. 15,1911, p. 153; 5000 w; 50c.

Standfield, Edg.—*Coals of Canada,* by J. B. Porter and others; *Part 8, Work of the Chemical Laboratory;* [Sampling, analytic methods, and analyses of Canadian coals].—Canada Dept. Mines, Mines Branch Report No. 83; 1912; Vol. 2; pp. 121-184*; tables; $1.25.

Steinem, C.—*A Simple Automatic Sampler.*—Mex. Mng. Jnl., Jan.,1912, p. 37; 300 w*; 25c.

Strauss, L.—*Sampling;* [Costs of crushing and preparing samples in Chile].—Mng. Mag., Dec.,1911, p. 433; 350 w*; 35c.

Stromeyer, C. E.—*Coal Sampling;* [From chief engineer's report, Manchester Steam Users' Asso.].—Coll'y Guardn., Dec.8,1911, p. 1125; 1800 w; 30c. Also in Australian Mng. Standd., March21,1912; p. 261; 1500 w; 35c.

Stuckenberg, W. D.—*How to Take a Sample of Coal from a Bunker.*—Black Diamond, Dec.30,1911, p. 20; 1500 w*; 30c.

Todd, W. H.—*Sampler for Cyanide Plants.*—E. & M. J., March16,1912, p. 541; 300 w*; 25c.

N. R.—*Difficulties in Sampling Free-Milling Gold Ore.*—Mines & Minerals, June, 1912; p. 659; 300 w; 35c.

———. *A Pulverizer for Assayers.*—Mines & Minerals, Apr.,1912; p. 560; 350 w; 35c.

———. *An Automatic Tailing Sampler.*—E. & M. J., Jan.13,1912, p. 112; 300 w*; 25c.

———. *Grinding Assayers' Samples;* [McCool pulverizer].—Mng. Sci., Feb.15, 1912; p. 175; 500 w*; 20c.

———. *Ore Valuation in Recovery Works;* [Problem of tonnages and extraction measurements].—S. Afr. Mng. Jnl., May4,1912; p. 353; 2000 w; 35c.

———. *Probenahme von Handelsdüngemitteln durch vereidete Probenehmer;* [Sampling of commercial fertilizers by authorized samplers; rules of Magdeburg conventions of Oct.10,1898, and Feb.17, 1912].—Zentralbl. f. Kunstdünger Ind., Apr. 21,1912; p. 123; 1500 w; 35c.

———. *Versuche und Verbesserungen beim Bergwerksbetriebe,* 1911; [Innovations and improvements in Prussian mining in 1911; mechanical sampler in Clausthal district, Hartz Mtns.].—Zts. f. d. Berg-, H-, & Salinenw., Vol. 60, No. 1; 1912; pp. 128-129*; $1.50.

CHEMISTRY OF CYANIDING

See under "Cyanidation."

SIDERURGIC CHEMISTRY

See under "Iron and Steels."

CHAPTER XII.—POWER AND MACHINERY.

Miscellaneous; General

Binder, L.—*Ueber Wärmeübergang auf ruhige oder bewegte Luft sowie Lüftung und Kühlung elektrischer Maschinen;* [Heat transmission and radiation in stationary and mobile atmospheres, and the ventilation and cooling of electrical machinery].—Halle, 1912; 116 pp.; 45 figs; $2 (book).

Brislee, F. J.—*An Introduction to the Study of Fuel* [and technical application].—London, 1912; pp. 258; 61 figs.; $2.50; (book).

Cole, E. L.—*Faulty Power Plant Design.*—Coal Age, March9,1912; p. 704; 1000 w*; 20c.

Contzen, H.—*Messgeräte für Druck und Geschwindigkeit von Gasen und Dampfen;* [Meters for pressure and speed of gases and steam; supplementary to E. Stach's paper of 1911].—Stahl & Eisen, Apr.4,1912; p. 573; 1200 w*; 75c.

Josse, E.—*Neuere Kraftanlagen;* [Newer developments in Germany in Power Plants and Power Production].—Munich & Berlin, 1911 (2d edition); 149 pp*; $2.00 (book). Review by Prof. L. S. Marks in Engg. News, Jan.18,1912; p. 131; 1300 w; 25c.

Lane, H. M.—*First Aid to Mining Machinery; VII;* [Methods for large or heavy castings, such as lead kettles].—E. & M. J., Feb.10,1912; p. 321; 4500 w*; 25c.

Lane, H. M.—*First Aid to Mining Machinery; VI: Making Molds for Hoppers.*—E. & M. J., Jan. 27; p. 224; 2400 w*; 25c.

Leprince-Ringust, F.—*Rapport de Mission en Angleterre et en Allemagne sur la Distribution de l'Energie dans les Régions Houillères;* [Report of the French commission to England and Germany on the Distribution of Power in Collieries].—Annales d. Mines (Paris), Oct.,1911; 112 pp.*; $1.50.

Italian abstract in Rassegna Mineraria Apr.11, p. 110; Apr.21, p. 229; 3000 w; 50c.

Royds, R.—*The Testing of Motive Power Engines; Including Steam Engines and Turbines, Locomotives, Boilers, Condensers, Internal Combustion Engines, Gas Producers, Refrigerators, Air Compressors, Fans, Pumps, etc.*—New York, 1911; 396 pp*; $4.00 (book).

Tupper, C. A.—*Ore and Coal Mining Machinery;* [Similarity, and interdependence for development].—Mines & Minerals, March.1912; p. 454; 1800 w; 35c.

British Science Guild.—*Natural Sources of Energy;;* [Symposium by Sir B. Redwood on Petroleum; Sir Wm. Ramsay on heat of Atomic Transformation; R. J. Strutt, Internal Heat of the Earth; G. T. Beilby, Coal Resources of Gt. Britain; V. B. Lewes, Economic Carbonization of coal; D. Clerk, Combustion Engines; Sir Chas. Parsons, Efficiency in Steam Engines; etc.; abstract].—Coll'y Guardn., Apr.4,1912; p. 679; p. 695; 10,000 w; 35c. Also abstracted and reviewed in Engnrg., March29, p. 424; 1600 w; 35c. Also in El. Rev. (London), Apr.5, p. 520; 1200 w; 35c.

———. *Hauling Heavy Machinery.*—E. & M. J., Jan.20,1912; p. 157; 600 w; 25c.

———. *Quick Repairs to Machines to Avoid Suspension;* [Machine shop and storehouse of O'Gara Coal Co.].—Black Diamond, March9,1912; p. 16; 2000 w; 30c.

LUBRICANTS; GEARS; TRANSMISSION

Caldwell, J. M.—*Lubricants and Lubrication;* [Read to British Instn. of Mechl. Engrs., Calcutta branch].—Indian & Eastn. Engr., April,1912; p. 145; May, pp. —; 4000 w; 75c.

Cole, E. L.—*Needless Waste of Grease and Oil.*—Coal Age, Feb.10, 1912; p. 568; 1700 w*; 20c.

Day, P. C.—*Herringbone Gears with Special Reference to the Wuest System;* [Read to Amer. Soc. of Mechl. Engrs.; abstract].—Iron Age, Dec.21,1911, p. 1364; 2000 w*; 30c. Also in Ind'l Engg., Jan.,1912; p. 27; 3500 w*; 35c. Also in Engg. Mag., Feb., p. 820; 1200 w*; 35c. Also in Engg. Rev., Feb.15, p. 344; Apr.15, p. 421; 7000 w*; 50c.

Derby, A. E.—*Care of Belting in the Factory.*—Power, Jan.9,1912; p. 42; 1600 w*; 20c.

Hay, D.—*A Coil Friction Clutch in Use at Shirebrook Colliery;* [Read to Natnl. Asso. of Coll'y Managers; S. Midland branch; abstract].—Iron & Coal Trades Rev., Apr.26,1912; p. 648; 500 w*; 35c.

Howarth, R.—*EveryDay Calculations* [for speed and weight of flywheels].—Practl. Engr., May15,1912; p. 516; 500 w*; 20c.

Jackson, H. D.—*Possible Power Economies;* [Central plant for waste coal].—Coal Age, March9,1912; p. 707; 1000 w; 20c.

Jeffrey, R.—*Lubricants, Their Properties and Uses.*—Power, Feb.6,1912; p. 189; 1800 w; 20c.

Nemecek, J.—*Zur Beurteilung der Mineral-Maschinen-Schmieröle bei deren Ankaufe;* [The purchase and comparative-value determination of mineral lubricating oils].—Montan Ztg., May1,1912; p. 162; 1400 w; 35c.

"R. E. N."—*The Use of Steel Belts in Power Transmission.*—Mechl. World, Jan.5, 1912; p. 7; p. 27; 2400 w*; 50c.

Silberberg, L.—*Entwickelung und Aussichten des Stahlbandantriebes;* [Development and present status of steel-belt drive].—Ver. Deu. Ingr., Zts., Oct.21,1911, p. 1768; 5000 w*; 50c.

———. *The Use and Care of Belting.*—Ind'l Engg., Oct.,1911, pp. 285-; Nov., pp. —; Dec., pp. 465-469; Jan.,1912, pp. —; 95c.

———. *The Use and Care of Belting.*—Ind'l Engg., Oct.,1911, p. 285; Nov., p. 385; Dec., p. 465; Jan.,1912, p. 44; 14,000 w*; $1.20.

———. *Ueber Schmiermittel;* [Lubricants and lubricating for mining machinery and equipment].—Bergbau, May30, 1912; p. 307; 1600 w*; 35c.

Electricity in Mine, Mill, etc.

See also Electrosiderurgy, Chapter 4; also Electrometallurgy, Chapter 11.

POWER PLANTS; GENERATORS

Ackley, C. S.—*Electric Power from Anthracite Waste;* [Lehigh and Harwood plants in Pennsylvania].—E. & M. J., Dec. 23,1911, p. 1213; 400 w; 25c.

Allingham, G. C.—*A Battery Sub-station Plant at Hucknall Colliery, Nottingham.*—El. Rev. (London), Jan.19,1912; p. 99; 1000 w*; 35c.

Baumann, K.—*Recent Developments in Steam Turbine Practice;* [Read to Instn. of

Electr. Engrs., Manchester section; abstract].—Electrician, Feb.2,1912; p. 662; 4500 w*; 35c.

Blau, E.—*Die Verwendung von Turbomaschinen im modernen Bergwerksbetriebe;* [Applications of turbines in modern mining practice].—Deu. Bergwerks Ztg., Suppl. No. 6, Nov.28,1911; p. 1; No. 7, Dec. 9, p. 1; 4500 w; 50c.

Bright, G.—*Does it Pay the Average Coal Mine to Purchase Central Station Power?*—Amer. Inst. Electr. Engrs., Proc; May, 1912; pp. 523-534; $1.15. Abstract in Coal Age, June8, p. 1139; 4000 w; 20c.

Butt, T. P. E.—*The Electrification of the Randfontein Central;* [Power station, transmission, costs, etc.; read to S. Afr. Inst. of Engrs.; abstract].—Iron & Coal Trades Rev., Feb.2,1912; p. 173; 7000 w*; 30c.

Dreyfuss, *E. D.—The Development of Steam Turbine Design;* [Read to Indiana Electric Light Asso.; abstract].—Power, Oct.3.1911; p. 536; 3500 w; 15c. Also in El. Rev. (Chicago); Oct.7, p. 732; 5000 w; 20c. Also in Engg. News, Oct.5,1911, p. 415; 3200 w; 20c. Also in Mechl. World, Jan.26,1912; p. 40; 2500 w; 35c.

Dunlop, Jas.—*Gas-Engines for Colliery Power Stations;* [Comparisons with electricity].—Engnrg., Dec.29,1911, p. 8761, 750 w; 30c.

Farwell, —. *Comparison of Commercial Economy of Gas Engines and Steam Turbines.*—Electr. World, Feb.3,1912; pp. 246-248*; 50c.

Fiseher, —. *Electric Generating Station at Montgomery, Ala.*—Electr. World, Feb. 17,1912; pp. 354-355*; 35c.

Fishinger, E. G.—*Die Elektrizitätszentrale der Braunkohlengrube Lauchhammer;* [Europe's first 110,000-volt plant, that at the Lauchhammer lignite mines; from Elektrotechn. Zts., 1911, Nos. 33, 34, 35].—Kohle u. Erz, Dec.11,1911, p. 1279; 500 w; 35c.
English abstract in Electrician, Dec.22, 1911, p. 422; 1600 w*; 35c.

Gascoyne, R.—*Electrical Power in the Transvaal;* [Chiefly power plants and hoisting].—Cassier's Mag., Feb.,1912; p. 99-116; 6,000 w*; 35c.

Hobart, H. M.—*The Relative Costs and Operating Efficiencies of Polyphase and Single-Phase Generating and Transmitting Systems.*—Amer. Inst. Electr. Engrs., Proc.; Feb.,1912; p. 159-185*; $1.15.

Hoeltje, —. *Die Kraftversorgung des Kleingewerbes durch Gas und Elektrizität;* [Gas versus electric power for the small industrial plant].—Dingler's polytechn. Jnl., Jan.6,1912; p. 7-10; Jan.13, p. 25-29*; $1.

Jackson, H. D.—*Electric Power Plants for Mines.*—Coal Age, June1,1912; p. 1102; 2800 w*; 20c.

Kesselring, F.—*Die Rentabilität von Ueberlandzentralen;* [Financial profitableness of central power stations for long distance transmission].—Elektrotechnik & Masch. Bau, Jan.21,1912, p. 49-55] 35c.

Klingenberg, —. *Das Märkische Elektrizitätswerk;* [The boiler and power plant of the Mark Brandenburg electric power works].—Ver. Deu Ingr., Zts., Dec.23,1911, pp. 2121-2130*; Dec.30, pp. 2164-2169*; $1.00.

Lyford, O. S., and R. W. Stoval.—*Average Construction Costs of Steam Turbo-Electric Power Plants;* [Read to Engrs. Soc. of W. Penn.].—Engg. & Contractg., March6,1912, p. 280; 750 w; 20c.

Rhodes, Geo. I.—*A Method of Studying Power Costs with Reference to the Load Curve and Overload Economies.*—Amer. Inst. Electr. Engrs., Proc., Feb.,1911; p. 129-149*; $1.15.

Snell, J. F. C.—*Power House Design.*—London, 1911; pp. —; $6 (book).

Soulier, —. *Première installation européenne à* 110,000 volts; [Europe's first 110,000-volt power plant and transmission system; Lauchhammer lignite mines].—Ind. Electriq., Jan.10,1912; p. 12*; 50c.

Starr, D. A.—*Power Generation and Distribution in the Clyde Valley Electr. Power Co.'s Area;* [Read to Instn. of Electr. Engrs.; Scottish local section; abstract].—Electrician, June7,1912; p. 348; 450 w*; 35c.

Tupper, C. A.—*Modern Power Plants in Florida Phosphate District.*—Mining & Engg. World, Feb.3,1912; p. 291; 2100 w*; 10c.

Witz, A.—*Die Verwendung von Gasmotoren in Elektrizitätswerken;* [Application of gas engines in electric power plants; from Génie Civil, Nov.,11,1911 (French)].—Elektrotechnik u. Maschinenbau, Jan. 21, 1912, p. 61; 1000 w; 35c.

———. *Production Costs in Turbo-Engine Station* [Cambridge, Mass.].—Engg. Record, May25,1912; p. 562; 800 w; 20c.

———. *Steam Engines, Steam Turbines and Internal-Combustion Engines for Generating Electricity, VIII.*—Mechl. World, Jan.5,1912; p. 7; 1600 w*; 35c.

———. *The Utilization of Crude Petroleum for Electric Power Generation;* [Oil gas-producers and electricity from gas-engines at Los Angeles, Cal.].—El. Rev. (London), Dec.8,1911, p. 934; 2600 w*; 35c.

———. *Vancouver Island Power Co.'s New Power Plant.*—Brit. Columbia Mng. & Engg. Record, Sept.,1911, p. 38; 2500 w*; 35c.

ELECTRIC GENERATION AT COLLIERIES

See also under "Coal;" also under "Waste Disposition."

Geipel, W.—*Electricity Direct from the Coal Mine;* [Advocates burning at base of upcast shaft].—El. Rev. (London), Apr.26, 1912; p. 669; 400 w; 35c.

Heyer, W.—*Elektrische Zentralen im Berg- und Hüttenwesen;* [Electrical central power plants in mining and metallurgical works].—Techn. Blätter, Feb.10,1912; p. 41; 2000 w; 45c.

Hunter, J. V.—*Central Station Generation of Power at Mining Centers;* [Costs of shipping electricity instead of coal].—Amer. Inst. Electr. Engrs., Proc.; Dec., 1911, pp. 2493-2501*; March, 1912; pp. 277-282; $2.15.

Leprince-Ringuet, F.—*Sur la production, la distribution et l'emploi d'électricité par les charbonnages;* [The production, distribution and uses of electricity by coal mines, chiefly in France, England and Germany].—Paris, 1912; 136 pp; 49 figs; $2.50 (book).

Leprince-Ringuet, F.—*Rapport de Mission en Angleterre et en Allemagne sur la Distribution de l'Energie dans les Régions Houillères;* [Report of the French commission to England and Germany on the Distribution of Power in Collieries].—Annales d. Mines (Paris), Oct.,1911; 112 pp.*; $1.50.
Italian abstract in Rassegna Mineraria, Apr.11, p. 110; Apr.21, p. 229; 3000 w; 50c.

Pitaval, R.—*Les mines qui vendent du courant électriques;* [The coal mines of France which generate and ship electric power instead of coal; from "Echo d. Mines"].—Soc. Amicale d. Mineurs de

Douai, Bull., Jan.10,1912, p. 14; 1800 w; 35c.

Russwurm, —. *Kraftwirtschaft in England und Westdeutschland;* [Power generation in the mining districts of England and West Germany].—Techn. Blätter, May4, 1912; p. 137; May18, p. 155; 7000 w*; 50c.

Thomas, W. A.—*Central Station Power in Coal Mines.*—Amer. Inst. Electr. Engrs., Proc; March,1912; pp. 245-258*; $1.15.

Wagner, E. B.—*Central Station for Colliery Service;* [Equipment of Lehigh Valley Co. near Centralia, Pa.].—Coal Age, Apr.6,1912; p. 838; 1500 w*; 20c.

———. *Die Ueberlandzentrale des Steinkohlenbergwerkes Rheinpreussen;* [The long-distance-transmission power-plant of the Rheinpreussen collieries; from E. T. Z., Nos. 49, 50; 1911; abstract].—Elektrotechnik & Masch-Bau, Jan.21,1912, p. 60; 750 w; 35c.

———. *Lehigh Mines to Ship Electricity;* [From anthracite mines west of Mauch Chunk, Penn.].—Mining & Engg. World, Jan.20,1912, p. 115; 400 w; 10c.

Also discussed in Coal & Coke Op., May 16,1912; p. 307; 1000 w; 25c. Also in E. & M. J., May18, p. 992; 800 w; 25c. Also in Coal Age, June29, p. 1248; 1000 w; 20c. Also in Power, July23, p. 113; 800 w; 20c.

HYDRO-ELECTRIC

See also under "Hydraulic Power and Machinery."

Ayres, L. E.—*A Municipal Hydroelectric Plant;* [Sturgis, Michigan].—Engg. Record, March2,1912; p. 230; 1800 w*; 25c.

Baker, E. F.—*Water Power Development in Ohio.*—Power, Feb.20, 1912; p. 244; 1200 w*; 20c.

von Below, —. *Die Niederdruck Wasserkraftanlage Unter-Preilipp;* [The low-head hydro-electric plant at Unter-Preilipp, Saal river, Germany; from "Die Turbine," Feb.20,1912].—Elektrotechnik & Masch-Bau, March24,1912, p. 253; 750 w; 35c.

Bernard, L.—*Die Gailwerke;* [Hydro-electric installation at Villach for the Austrian Alps railways].—Elektrotechnik & MaschBau, March10,1912; p. 201; March17, p. 26; $10,000 w*; 50c.

Bitta, —.*Zum neuen Entwurf cines preussischen Wassergesetzes;* [Newly proposed Prussian law on water rights].—Stahl & Eisen, Jan.18,1912; pp. 89-95; 75c.

Bougault, P.—*La législation des chutes d'eau;* [Laws governing use of water power in France].—Grenoble, France; 1911; 350 pp; $2.50 (book).

Brillouin, A.—*Les forces motrices hydrauliques des Pyrénées espagnoles;* [Hydro-electric resources and developments in the Spanish Pyrenees; read to Soc. d. Ingrs. Civils, France; abstract].—Jnl. du Four Electriq., March15,1912; p. 128; 2100 w; 35c.

van Brussel, J. B.—*Large Swedish Hydro-Electric Plant;* [Trollhättan government works; 100,000 hp.].—Power, Apr.23, 1912; p. 572; 1200 w*; 15c.

Buckner, N.—*The Marshall Hydro-Electric Plant on the French Broad River, N. Carolina.*—Engg. Record, March16,1912; p. 294; 1000 w*; 20c.

Coldwell, O. B.—*Selection of a Water Wheel Unit.*—Amer. Inst. Electr. Engrs., Proc., Apr.,1912; pp. 363-382*; $1.15.

Cooper, H. L.—*Water Power Development of Mississippi River Power Co. at Keokuk, Iowa.*—Western Soc. of Engrs., Jnl., March, 1912; p. 216-226*; 65c.

Hafer, C.—*Hydro-Electric Plant of the Arizona Power Co.*—Mining & Engg World, June15,1912; p. 1245; 1500 w*; 10c.

Henry, G. J.—*The Development of the Turbine.*—Jnl. of El'y Power & Gas, March 2,1912; p. 191; March30, p. 286; 6000 w*; 65c.

Henry, G. J. and J. H. Hansen.—*Test of a 2880-kw. Rebuilt Hydro-electric Unit at the Kern River Plant of the Pacific Light & Power Co., Cal.;* [Read to Amer. Inst. of Electr. Engrs.; abstract].—Engg. News, Jan.18,1912; p. 87; 1800 w*; 25c.

Johnson, R. D. O.—*The Santa Rita Pressure Box;* [at hydro-electric plant of Santa Rita Mng. Co., Colombia].—E. & M. J., May4,1912; p. 880; 500 w*; 25c.

Kaumann, —. *Das Verwendungsgebeit der bayerischen Wasserkräfte;* [Industrial utilization of the hydro-electric powers of Bavaria].—Zts. f. Turbinenw., Dec.30,1911; pp. 561-564; 75c.

Huston, Geo.—*Hydro-electric Installation in the Coeur d'Alenes.*—Mining & Engg. World, Feb.3,1912; p. 281; 1800 w*; 10c.

Marshall, W. F.—*Hydro-electric Power Plants;* [Principles underlying their promotion; read to Victorian Inst. of El. Engrs., Sept.,1911]. — Australian Mng. Standd., Nov.2,1911; p. 447; 2500 w; 35c. Also in Mex. Mng. Jnl., May,1912; p. 21; 2500 w; 25c.

Maujer, A. R.—A. R.—*The Pacific Gas & Electric Co.*—Power, May21,1912; p. 720; 2700 w*; 15c.

Moore, Dew. V.—*The Power Plants of the Southern Indiana Power Co.;* [Read to Indiana Engg. Soc.; abstract].—Engg. Record, Feb.10,1912; p. 156; 2700 w*; 20c.

Mudge, A. L., and others.—*Hydro-Electric Power Development of the British Canadian Power Co.;* [at Cobalt, Ontario, mines].—Canadn. Soc. of Civ. Engrs., Proc. f. Jan.,1911; pp. —.

Newlands, A.—*Highland Water Power;* [Some undeveloped and developed Scottish powers; read to Iverness Field Club; abstract].—Iron & Coal Trades Rev., May24, 1912, p. 840; 2700 w*; 30c. Also in El. Rev. (London), May31,1912; p. 874; 1000 w*; 35c.

Van Norden, R. W.—*New Hydroelectric Plant of the Northern Cal'fornia Power Co.* —El. World, Feb.3,1912; p. 237-241*; 35c.

Van Norden, R. W.—*Puget Sound Traction, Light & Power Co.'s System.*—Jnl. of El'y Power & Gas, June1,1912; p. 511-552*; 35c.

Pfau, A.—*The Largest Hydraulic Turbines in the World;* [at White River project, Washington].—Engg. News, Apr.18, 1912; p. 730; 5000 w*; 20c. Also in Engg. Record, Apr.20; p. 440; 2400 w*; 20c.

Pfau, Arnold.—*The White River Power Development in Washington.*—Engg. News, Apr.11,1912; p. 704; 3200 w*; 20c. Also in Engg. Record, Apr.13, p. 396; 3200 w*; 20c. Also in Jnl. of El'y Power & Gas, Apr.13, p. 327; 4000 w*; 35c. Also in Power, Apr.16,1912; p. 534; 3600 w*; 15c.

Putnam, W. R.—*Water Power Possibilities of the Black Hills.*—Pahasapa, June, 1912; pp. 7-12*; 65c.

Ralston, J. C.—*Water-Power Legislation in Western Mining States;* [Read to Northwest Mng. Convention, Spokane, Feb.].—Mining & Engg. World, March9,1912; p. 551; 2100 w; 10c. Also in Mng. Sci., March 14, p. 251; 2500 w; 20c.

Reindl, C. — *Kleine Wasserkraft-Elektrizitätswerke, besonders deren selbsttätige Regulierungsarten;* [The small hydro-elec-

tric plant, with special reference to automatic methods of regulation; reprint from Zts. f. Turbinenwesen, Nos. 10-24, 1911].—Munich, 1912; 48 pp.; 70 figs.; $1.20; (book).

Roberts, A. H.—*Loch Leven Hydro-Electric Installation;* [Read to Instn. of Civ. Engrs.; abstract].—Indian & Eastn. Engr., Dec.,1911, p. 227; 1200 w; 65c. Also in Canadn. Engr., Jan.4,1912; p. 108; 1400 w; 25c.

Ross, J. D.—*Plant Efficiency; An Analysis of the Losses of a Hydroelectric System.*—Amer. Inst. Electr. Engrs., Proc; May, 1912; pp. 467-480*; $1.15.

Schreiber, H.—*Die Wasserkraftausnutzung und das neue Wasserrecht;* [The new Austrian water laws and the development of water power; read to Elektrotechn. Ver., Jan., 1912].—Elektrotechnik & MaschBau, March3,1912; pp. 180-188; 9000 w; 35c.

Scott-Hansen, A.—*Hydro-Electric Plants in Norway and Their Application to Electro-chemical Industries.* — Faraday Soc., Trans., Nov.,1911, pp. 78-93*; $4.00.

Sibley, R.—*The Pacific Light and Power System.*—Jnl. of El'y Power & Gas, Feb.24, 1912; p. 151; 10,000 w*; 35c.

Smith, C. B.—*Power for Cobalt Mines, Ontario;* [Reviews various hydro-electric companies supplying this field].—Asso. of Engg. Soc., Jnl.; Jan.,1912; p. 56; 1200 w; 50. Abstract in Mng. & Engg. World, March2, p. 503; 1200 w*; 10c.

Smith, H. K.—*Water Power Development in the U. S.;* [Report of Commissioner of Corporations to President Taft].—Washington (Dept. Commerce & Labor), 1912; pp. —; (book).

Switzer, J. A.—*The Preliminary Consideration of Water-Power Projects.*—Resources of Tennessee, April,1912; p. 133-156*; 35c.

Switzer, J. A.—*The Ocoee River Power Development, Tenn.*—Canadian Engr., March 7,1912; p. 381; 1600 w*; 25c.

Switzer, J. A.—*The Power Development at Hale's Bar;* [Tennessee's largest works].—Resources of Tenn., March,1912, pp. 86-99*; 35c.

Taylor, H. B.—*Some High-Power Hydraulic Turbines* [Washington Water Power Co.].—Engg. Record, May25,1912; p. 568; 2000 w*; 25c.

Tupper, C. A.—*Hydro-Electric Power for Minnesota Ranges;* [Gt. Northern Power Co., developments].—Mining & Engg. World, March23,1912; p. 643; 3600 w*; 20c.

Tupper, C. A.—*Power from Italian Mountain Streams at Heads from 656 to 2985 ft.—The Adamello Development.*—Engg. News. Dec.28,1911, p. 764; 5000 w*; 25c.

Tupper, C. A.—*Power System Cleveland Cliffs Iron Co.;* [Hydro-electric and steam turbine].—Power, Jan.9,1912; p. 40; 1200 w*; 20c.

Tupper, C. A.—*Power System, Cleveland Cliffs Iron Co.* [Carp River hydro-electric plant, steam auxiliary].—Power, Jan.9, 1912; p. 40; 1200 w*; 20c. Also in E. & M. J., Feb.3, p. 274; 1200 w*; 25c.

Weller, F. R.—*An East Tennessee Hydro-Electrical Development;* [Wautauga river, Carter county].—Power, March26,1912; p. 432; 1200 w*; 15c.

Werner.—*Die Wasserwirtschaft von St. Andreasberg im Harz;* [Hydraulic power in the St. Andreasberg mining and smelting district, Hartz Mtns., Prussia].—Zts. f. d. Berg-, H-. & Salinenw., Vol. 60, No. 1; 1912; pp. 56-74*; $1.50.

Wilson, W.—*Some Hydro-Electric Power Plants in New Zealand.*—Mng. & Engg. Rev.,March,1912; p. 263; 1500 w*; 35c.

U. S. Geol. Survey, Hydrographic Division.—*Water Powers of North Carolina.*—N. Car. Geol., etc., Survey, Bull. 20, 1911; 383 pp*; $1.

Commission of Conservation, Canada.—*The Waterpowers of Canada;* [Hydro-electric].—Ottawa; 1911; 397 pp*; (book).

———. *140,000-Volt Power Transmission;* [Cooke hydroelectric plant, Au Sable river, Michigan].—Engg. News, May16, 1912; 3500 w*; 25c.

———. *A New Hydro-electric Plant in the State of Oaxaca;* [Cia. Minera de Natividad & Anexas plant].—Mex. Mng. Jnl., June,1912; p. 44; 1000 w*; 25c.

———. *Brazilian Hydroelectric Plant Utilizing a 2100-ft. Head;* [near Santos, S. Paulo].—Engg. Record, March23,1912; p. 320; 1000 w*; 20c.

———. *Calgary Hydro-electric Plant.*—El. World, Dec.23,1911; p. 1539-1542*; 45c.

———. 1: *Central Georgia Power Co.;* 2: *Fredericksburg Power Co., Va.*—Manfrrs. Record, Feb.22,1912; p. 99; p. 101; 4000 w*; 65c.

———. *Defects in Hydro-electric Plant Design.*—El. Rev. (Chicago), May4,1912; p. 834; 1000 w; 20c.

———. *Die Wasserkraftanlagen des Elektrizitätswerkes Kandergrund der Bernischen Kraftwerke A. G.;* [Hydro-electric plant of the Berne Power Co., Kander river].—Elektrotechnik & MaschBau, March 24,1912; p. 253; 750 w; 35c.

———. *Hydroelectric Station of the Cia. Docas de Santos, Brazil.*—El. World, March16,,1912; p. 583-586*; 35c.

———. *Hydro-electric Development of the Salt River Project;* [Roosevelt dam, power plant and transmission].—El. Rev. (Chicago), Dec.30,1911, p. 1319; 4200 w*; 20c.

———. *Installation of Hydro-electric Unit;* [Two 13,000-hp. units at Stave Falls, B. C.].—Canadn. Engr., Feb.15,1912; p. 308; 200 w*; 25c.

———. *Kern River Hydro-Electric Power Plants, California.*—Practl. El'y, Dec., 1911, p. 97; 2500 w*; 20c.

———. *New Hydraulic Valve;* [at Niagara Falls plant].—Canadian Engr., March 14,1912; p. 404; 700 w*; 25c.

———. *New Hydroelectric Plant in Oregon;* [at Estacada].—Engg. Record, March23,1912; p. 314; 3600 w*; 20c.

———. *Plant of the Washington Water Power Co.;* [Near Spokane, Wash.; supplying Washington and Idaho mines].—Brit. Columbia Mng. & Engg. Record, Sept.,1911, p. 59; 1000 w; 35c.

———. *Power Development on East Canada Creek;* [New 4000 hp. plant. Ingham Falls, N. Y..—Engg. Record, June8, 1912; p. 623; 1800 w*; 25c.

———. *Power Development at Sandy Falls on the Mattagami River;* [Porcupine, Ont.].—Engg. Record, March30,1912; p. 344; 1500 w*; 20c.

———. *Power Plant for Upper Michigan Mines;* [Carp River plant of Cleveland Cliffs Iron Co.].—Iron Age, May2,1912; p. 1077; 2000 w*; 30c.

———. *Some Recent Böving Water-Turbine Plants.*—El. Rev. (London), Apr.5, 1912; p. 547; 2500 w*; 35c.

———. *Sviluppo degli impianti elettrici in Italia dal 1899 al 1910;* [Development of electric plants in Italy in the decade 1899-

1910].—Rassegna Mineraria, Feb.11,1912; p. 85; March1, p. 129; 5000 w; 50c.

———. *The Gullspang Hydro-Electric Power Station, Sweden.*—Engnrg., Dec.22, 1911; p. 819; 2700 w*; 35c.

———. *The Hydro-electric Plant at Trollhattan Falls, Sweden.*—Engg. Record, Dec. 30,1911, p. 771; 600 w; 25c.

———. *The Hydro-Electric Power Scheme of the City of Winnipeg.*—Electrician, March1,1912; p. 832; March8, p. 870; 6000 w*; 50c.

———. *The Hydro-Electric Plant at Marseilles;* [Illinois; low-head plant].—Engg. Record, Feb.24,1912; p. 204; 1600 w*; 25c.

———. *The Lake Coleridge Hydro-Electric Power Plant of the New Zealand Government.*—Mng. & Engg. Rev., Apr., 1912; p. 310; 1800 w*; 35c. Also in El. Rev. (London), Apr.26, p. 670; 2000 w*; 35c.

———. *The New Hydroelectric Power Plant at Shawinigan Falls, Quebec.*—Engg. Record, May11,1912; p. 526; 2500 w*; 25c.

———. *The Snell Hydro-electric Development on Raquette River, N. Y.*—Engg. Record, Feb.17,1912; p. 172; 1800 w*; 20c.

———. *The Swedish State Power Stations.*—Engnrg., May3,1912; p. 587; 2100 w*; 35c.

———. *The Waihi Hydro-Electric Plant;* [Low pressure turbine plant of Waihi Gold Mng. Co., N. Z.].—Mng. & Engg. Rev., Jan., 1912; p. 184; 500 w*; 85c. Also in Indian & Eastn. Engr., April,1912; p. 134; 500 w*; 35c.

———. *Water Power from the Beauharnois Canal;* [72,000 hp. from abandoned ship canal, rapids of St. Lawrence river, Quebec].—Engg. Record, Apr.6,1912; p. 382; 3500 w*; 25c.

———. *Water Power Development at Keokuk, Iowa.*—Iowa Engr., March,1912, p. 243-253*; 35c.

———. *Water Power for Coal Mines;* [Hydro-electric project of Appalachian Power Co., Va. and W. Va.]—Manfrrs. Record, Feb.22,1912; p. 96; 3000 w*; 65c.

POWER TRANSMISSION

Crozier, H. W.—*Construction of the Stanislaus Transmission Line, Cal.;* [Read to Amer. Inst. El. Engrs.; San Francisco section; abstract].—Jnl. of El'y Power & Gas, Feb.3,1912; p. 87; 2500 w*; 35c.

Dittmann, E.—*Berechnung elektrischer Leitungsnetze;* [Computations pertaining to electrical power circuits].—Strelitz, 1911; 108 pp; 72 figs.; $2.00 (book).

Dusaugey, E.—*Les conducteurs d'électricité en aluminium;* [Aluminum electrical conductors].—Paris, 1912; 140 pp.; 60 figs.; $2.50; (book).

Falch, O. E., Jr.—*Design of High-Tension Transmission Lines;* [Read to Amer. Inst. El. Engrs., San Francisco section; abstract].—Jnl. of El'y Power & Gas, Feb.10, 1912; p. 107; 2000 w*; 35c.

Guell, A.—*Mechanical Stresses in Transmission Lines.*—Univ. of Ill., Bull. No. 54; 1912; 31 pp*; 50c.

Haas, —. *Untersuchungen über Stromverluste elektrischer Leitungen;* [Tests on current losses in power circuits].—Elektrotechn. Anzgr.,. Feb.1,1912; pp. —; Feb. 8, pp. 131-133; 50c.

Lustgarten, J.—*High-Tension Porcelain Line Insulators;* [Read to British Instn. of Electr. Engrs., Manchester section].—Electrician, March29,1912; p. 1000; 4500 w; 35c. Also in El. Rev. (London), May10, p. 775; 6000 w*; 35c.

Lyman, Jas.—*Protection of High-Tension Power Circuits and Apparatus.*—Western Soc. of Engrs., Jnl., March,1912; p. 241-276*; 65c.

Naphtaly, S. D.—*Trans-Bay Cable of Great Western Power Co.;* [Submarine power cable in San Francisco bay; read to Amer. Inst. Electr. Engrs., San Francisco section].—Jnl. of El'y, Power & Gas, March 16,1912; p. 239; 4500 w*; 35c.

Pannell, E. V.—*The Characteristics of Copper vs. Aluminum Overhead-Line Conductors.*—El. Rev. (London), May10,1912; p. 771; May17, p. 815; 5000 w; 50c.

Searing, E. D.—*The Steel-Tower Transmission Line of the Portland Ry., Light & Power Co.;* [Read to Amer. Inst. Electr. Engrs., Portland section].—Jnl. of El'y Power & Gas, Apr.6,1912; p. 315; 3000 w; 35c.

Steinmetz, C. P.—*Some Problems of High-Voltage Transmission.*—Amer. Inst. Electr. Engrs., Proc; March,1912; pp. 259-265; $1.15. Abstract in Electrician, June7,1912; p. 360; 1500 w; 35c.

———. 140,000-*Volt Transmission System;* [Au Sable Electric Co., Michigan; from "El. World"].—Electrician, May31, 1912; p. 310; 4000 w*; 35c.

———. *The Ontario* 110,000-*volt Transmission System;* [From "El. World].—Electrician, Jan.26,1912; p. 631; Feb.2, p. 667; Feb.9, p. 708; Feb.16; p. 752; 7500 w*; 80c.

CONVERTERS; LOCAL TRANSMISSION; METERS; ETC.

Baker, Jos. B.—*Mercury Ampere-Hour and Watt-Hour Meters.*—El. Rev. (Chicago), Feb.10,1912; p. 282; 2200 w*; 20c.

Baker, Jos. B.—*Measurement of Electrical Energy by Recording Watt-Hour Meters. I Rotating-Field Induction Meters.*—El. Rev. (Chicago), Dec.23,1911, p. 1275; Dec.30, p. —; 7000 w*; 25c.

Bullen, A. T.—*The Earth Fault.*—El. Rev. (London), Jan.26,1912; p. 159; 1200 w; 35c.

Burrows, G. B.—*Fault Location on Mining Cables;* [Read to Asso. of Mng. Electr. Engrs., N. of England branch].—Coll'y Guardn., May3,1912; p. 887; 1600 w; 35c. Also in Iron & Coal Trades Rev., May3, p. 695; 3000 w*; 35c.

Cooper, B. A. M.—*The Localization of Faults on High- and Low-Tension Cables;* [Read to Asso. of Mng. Electr. Engrs.; abstract].—Iron & Coal Trades Rev., Feb.2, 1912, p. 180; 1500 w; 30c.

Edwards, G. E.—*Alternators in Parallel; Installation and Operation.*—Mining & Engg. World, June15,1912; p. 1235; 5,000 w*; 10c.

Falkenthal, E.—*A New Method of Converting Alternating to Direct Current;* [translated from E. T. Z.].—Electrician, Dec.8,1911, p. 351; 1000 w; 35c.

Fitch, T. T. and Huber, C. J.—*A Comparison of American Direct-Current Switchboard Voltmeters and Ammeters;* [from U. S. Bureau of Standards, Bull.].—Electrician, Dec.22,1911, p. 425; 2400 w; 35c.

Fraser, H. G.—*Installation and Maintenance of Colliery Cables;* [Read to Asso. of Mng. Electr. Engrs.; abstract].—Iron & Coal Trades Rev., Jan.5,1912, p. 15; Feb. 16, p. 254; 1000 w*; 50c.

Gramm, H.—*Ein neuer Wechselstrom-*

Umformer; [New mercury-vapor transformer].—Kohle & Erz, Apr.29,1912; p. 414; 1000 w; 35c.

Hutchinson, F.—*Precautions When Inserting Electric Cables in a Shaft.*—Sci. & Art of Mng., June8,1912; p. 524; 800 w*; 35c.

Jackson, H. D.—*Electric Transmission in Coal Mines.*—Coal Age, Jan.20,1912; p. 484; 2000 w; 20c.

Jones, C.—*Earthing, Earth-Plates and Leakage Detectors;* [read to Asso. of Electr. Mng. Engrs.].—Iron & Coal Trades Rev., Dec.8,1911, p. 236; Jan.5,1912, p. 16; Feb.9, p. 214; 9000 w*; 50c.

Leprince-Ringuet, F.—*La mise du point neutre à la terre et le contrôle permanent des isolements dans un réseau à courant alternatif;* [Earthing and permanent control of insulation in an alternating-current circuit].—Soc. de l'Ind. Minérale St. Etienne, Bull.; Feb.,1912; pp. 129-184*; $1.

Mosman, C. T.—*Notes on Underground Conduits and Cables.*—Amer. Inst. Electr. Engrs., Proc; May,1912; pp.759-785*; $1.15.

Nelson, A.—*Advantages and Disadvantages of Earthing Electrical Machines and Cables Underground.*—Sci. & Art of Mng., June8,1912; p. 522; 1000 w; 35c.

Peters, R. W.—*Earthed vs. Insulated Neutrals in Colliery Installations;* [Read to Asso. of Mng. Electr. Engrs., E. Scotland branch].—Iron & Coal Trades Rev., Apr.19,1912; p. 610; 2000 w*; 35c.

Ross, J. S.—*The Troubles of Cables;* [Read to S. Afr. Inst. of Electr. Engrs.].—S. Afr. Mng. Jnl., Apr.27,1912; p. 327; 2000 w; 35c.

Scholer, L.—*The Transformation of Electrical Energy;* [Describes several A. E. G. transformers and rotary converters].—Iron & Coal Trades Rev., Feb.2,1912, p. 176; 2000 w*; 30c.

Schürmann, Joh.—*Die Energieübertragung im Bergbau;* [Electric power transmission in mines and mining].—Deu. Bergwerks Ztg., Dec.28,1911, p. 1; 1000 w; 35c.

Thornton, W. M.—*Sparking from Armoured Cables,—A Negative Experiment;* [Read to Asso. of Mng. Electr. Engrs.].—Iron & Coal Trades Rev., Dec.15, p. 973; 1000 w; 30c. Also in Coll'y Guardn., Dec. 29. p. 1289; 1000 w; 30c.

Yensen, T. D.—*Starting Currents of Transformers, with Special Reference to Transformers with Silicon Steel Cores.*—Univ. of Illinois Bull. No. 55; Feb.,1912; 43 pp*; 50c.

———. *A Flame-Tight Switch and Fuse Box.*—Iron & Coal Trades Rev., Apr.5,1912; p. 537; 1000 w*; 35c.

———. *Mining Switchgear;* [Morley installations].—Iron & Coal Trades Rev., May 3,1912; p. 694; 5000 w*; 35c.

———. *Rotary Converters for Mine Service;* [Westinghouse types at Consolidated Coal Co. of Penn.].—Cassier's Mag., Feb., 1912; p. 64; 500 w*; 35c.

———. *Transformer Connections.*—Power, May7,1912; p. 657; 1200 w*; 20c.

MOTORS

See also "Haulage and Hoisting."

Bailey, B. F.—*The Induction Motor.*—N. Y. and London; 1911; pp. 25; 120 figs.; $2.50; (book).

Drake, A. P.—*Motor Starters for Mining Work;* [Read to Asso. of Mng. Electr. Engrs., Yorkshire branch].—Iron & Coal Trades Rev., Feb.23,1912, p. 282; 3000 w*; 30c.

Discussion before S. Wales, Warwick and various branches.—I. & C. T. R., March15, p. 416; p. 417; March22, p. 462; April26, p. 638; 10,000 w; 70c.

Fechheimer, C. J.—*Self-Starting Synchronous Motors.*—Amer. Inst. Electr. Engrs., Proc.; April,1912; pp. 305-362*; $1.15.

Gassaway, S. G.—*Electric Motors for Oil-Well Service;* [Pumping in California oil fields.—Jnl. of El'y Power & Gas, Jan.13, 1912; p. 25; 1500 w*; 35c.

Heather, H. J. S.—*Current and Power Factor in Induction Motors;* [Read to S. Afr. Inst. of Engrs.].—S. Afr. Mng. Jnl., Jan. 20, 1912; p. 713; 2000 w; 35c.

Kelly, A.—*Maintenance of Generators and Motors;* [Read to Victorian Inst. of Electr. Engrs.].—Mng. & Engg. Rev., Dec., 1911; p. 136; 1700 w; 35c.

Knight, C. D.—*Induction Motor Troubles.*—Practl. Engr., Apr.15,1912; p. 414; 1200 w*; 25c.

Makower, A. J., and P. A. Mossay.—*The Commercial Testing of 3-phase Induction Motors.*—Electrician, Apr.19,1912; p. 46; Apr.26, p. 105; 5000 w*; 50c.

Meyer, G.—*Methods for Economical Speed Regulation of 3-Phase Motors;* [From Elektr. Kraftbetriebe & Bahnen; trans. in abstract].—Electrician, Feb.2,1912; p. 671; Feb.9; p. 713; 6000 w*; 50c.

Niethammer, F., and E. Siegel.—*Ueber elektrische Bremsung mit besonderer Berücksichtigung der Wechselstrom-Kommutatormotoren;* [Electric braking with special reference to alternating-current commutator-motors].—Elektr. & Maschinenbau, Dec.24,1911, p. —; Dec. 31, p. 1092-1096*; 50c.

Schenfer, K.—*Kommutationskurven bei einphasenkollektormotoren;* [Commutation curves for monophase collector motors].—Elektr. & Maschinenbau, Dec.31,1911, p. 1087-1092*; 35c.

Specht, H. C.—*Electric Braking of Induction Motors.*—Amer. Inst. Electr. Engrs., Proc; May,1912; pp. 583-596*; $1.15.

Walker, S. F.—*Electrical Machinery for Coal Mines;* [Shunt-wound continuous motor vs. 3-phase induction].—Coal Age, March16,1912; p. 736; 2700 w; 20c.

Wiley, B.—*Direct Current and Alternating Current Mill Motors for Auxiliary Drives.*—Amer. Inst. El. Engrs., Proc; May, 1912; pp. 545-558*; $1.15. Abstract in Iron Age, May16, p. 1205; 1000 w; 30c. Also in Ind'l Engg., June,1912; p. 460; 4000 w*; 35c.

Williams-Ellis, M. I.—*A New Type of Induction Motor;* ["Cascade" single and multi-speed motor].—S. Afr. Inst. of Engrs., Jnl., April,1912; 14 pp*; 65c. Reprint in S. Afr. Engg., May,1912; p. 89; June, p. 103; 7000 w*; 50c.

Wolf.—*Beiträge zur Entwickelung der Gleichstrommaschine, deren Erregung vom Anker aus mittels einer Hilfsspannung oder eines Hilfsfeldes selbsttätig geregelt wird;* [The evolution of direct-current motors, excited from the rotor by auxiliary potentials or auxiliary fields which are controlled automatically].—Ver. z. Beförd. Gewerbefleisses; Verhandl., Feb.,1912; pp. —; March, pp. 198-220*; $1.50.

———. *Einrichtung zum Austrocknen von Elektromotoren unter Tage;* [Device for drying motors in damp underground workings].—Glückauf, Jan.6,1912, p. 30; 200 w*; 50c.

———. *Electric Motor Control; Devices Used for Starting, Stopping, Reversing and Regulating the Speed of Direct and Alternating Current Motors.*—Practl. Engr., March1,1912; p. 230; March15; p. —; 10,000 w*; 50c.

———. *The Electrical Motor in Stone Yards;* [In cranes, and in stone saws].—Stone Trades Jnl., June,1912; p. 1170; 500 w*; 35c.

STORAGE BATTERIES; DRY CELLS

Bennett, C. W. and D. S. Cole.—*The Regeneration of Sulphated Storage Cells.*—Amer. Electrocheml. Soc., Trans.; read April,1912; 6 pp.; 1500 w; 50c.

Kretzschmar, F. E.—*Die Krankheiten des stationären elektrischen Bleiakkumulators;* [The ailments of stationary storage batteries; their origin, determination, treatment and prevention].—Munich,1912; pp. 162; $2 (book).

Morse, H. W.—*Storage Batteries. The Chemistry and Physics of the Lead Accumulator.*—London, 1912; pp. —; $2 (book).

Committee on Dry Cells.—*Standard Methods Recommended for Testing of Dry Cells.*—Amer. Electrocheml. Soc., Trans. for April,1912; No. 16; 16 pp*; 50c. Abstract in Met. & Cheml. Engg., June,1912; p. 361; 5000 w*; 35c.

———. *Storage Battery Electric Locomotives for Tunnel Haulage;* [General Electric type on Catskill Aqueduct, N. Y.].—Coal Age, May11,1912; p. 1013; 750 w*; 20c. Also in E. & M. J., May11, p. 942; 150 w*; 25c. Also in Engg. & Contractg., June5, p. 628; 2000 w*; 20c.

———. *Storage Battery Locomotives;* [General Electric Co. types].—Coal Age, Feb.3,1912; p. 543; 1000 w*; 20c. Also in Coal & Coke Op., Feb.15; p. 112; 1000 w*; 25c.

———. *Storage Battery for Goldfield Mines, Nevada;* [Power control in isolated plants with varying load conditions].—Jnl. of El'y Power & Gas, Dec.30,1911, p. 609; 1800 w*; 35c.

ELECTRIC BLASTING

See under "Explosives and Blasting" in Chapter 8.

ELECTRIC LIGHTING

See under "Lighting and Signalling" in Chapter 8.

ELECTRIC PUMPS; FANS; DRILLS

See respectively under "Mine and Mill Waters;" "Pumps;" "Ventilation;" "Drilling."

Barbour, P. E.—*Unwatering a Mine with Electric Turbine Pumps;* [at Alta, Utah].—E. & M. J., May25,1912; p. 1027; 1000 w; 25c.

Brackenbury, C.—*Unwatering Tresavean Mine, Cornwall;* [Advantages of electrical high-lift turbine pumps over Cornish and turbine pumps].—Instn. of Mng. & Met'l'gy, Bull. 88, Jan.,1912; 35 pp*; 50c. (Discussion and reply), Bull. 89, Feb., pp. 3-16; Bull. 90, March, pp. 33-47*; $1.

Abstracts in E. & M. J., Feb.24,1912; p. 397; March2, p. 446; March9, p. 489; March16, p. 538; 4500 w*; 70c. Also in Mines & Minerals, April,1912; p. 566; May, p. 516; 10,000 w*; 65c. Also in Engg. News, May2, p. 836; 3000 w; 25c.

Eddy, L. H.—*Electric Mine Pumps in California.*—E. & M. J., May11,1912; p. 934; 500 w*; 25c.

Grimshaw, R.—*German Electric Mine Pumps.*—E. & M. J., Jan.20,1912; p. 174; 750 w*; 25c.

Heym, W.—*Die Anwendungen der Elektrizität in Grubenbetrieben;* [Applications of electricity in mining; V: Ventilation].—Kali Erz u. Kohle, Dec.15,1911, p. 1291; 1500 w; 35c.

Judson, W. R.—*The Testing of Electric Pumps.*—Mex. Mng. Jnl., Jan.,1912; p. 28; 3600 w*; 25c.

Lacroix, —. *Deux ventilateurs actionnés par moteurs électriques à courant triphasés dont un a vitesse variable;* [Two 3-phase ventilating fans at the Escarpelle collieries, one operating with variable speed].—Soc. de l'Ind. Minrl. St. Etienne, C-R., Oct.,1911, p. 571; 500 w; 75c.

Leese, J. S.—*Control of Centrifugal Pump Motors.*—El. Rev. (London), Dec.16, 1911, p. 991; 600 w; 35c.

Rushmore, D. B.—*Electric Pumping Machinery.*—E. & M. J., Jan.13,1912, p. 111; 750 w*; 25c.

Tupper, C. A.—*Pumping Plant at Sloss Iron Mines, Alabama;* [4-stage centrifugal induction motor pumps and 750 kw. turbine plant].—E. & M. J., March16,1912; p. 550; 1000 w*; 25c. Reprinted in Power, Apr.9, 1912; p. 596*; 15c.

———. *High-Tension Pumping Plant with One Leg Earthed;* [at Dover colliery].—Iron & Coal Trades Rev., May3,1912; p. 687; 500 w; 35c.

———. *Small Electric Pumping Plants.*—Jnl. of El'y Power & Gas, March 2, 1912; p. 198; 3600 w*; 35c.

ELECTRIC SIGNALING; TELEPHONES

See under "Lighting and Signaling" in Chapter 8.

HAULAGE; HOISTING

See also under "Haulage and Hoisting" in Chapter 9.

Barnes, J. J.—*Hoisting by Electricity;* [General considerations].—Mines & Minerals, Feb.,1912; p. 416; 1000 w; 35c.

Blau, E.—*Die Entwicklung der elekstrisch betriebenen Fördermaschine;* [The evolution of the electric-driven hoist].—Bergbau, May23,1912; p. 293; May30, p. 305; 3500 w; 50c.

Bright, G.—*Weight and Equipment of Mine Locomotives.*—El. Jnl., No. 11, 1911; pp. 986-998*; 50c.

Bütow and Dobbelstein.—*Vergleichende Untersuchungen an Grubenlokomotiven;* [Comparative tests of various types of mine locomotives; (1) compressed-air; (2) electric,—storage-battery and 1-phase alternating current].—Glückauf, March23, 1912; p. 461-468*; March30, p. 501-511*; (2), April27, pp. 661-667*; May4, pp. 701-710*; $1.50.

Cheney, H. W.—*Electrical Control of a Large Mine Hoist.*—Amer. Inst. Electr. Engrs., Proc.; March,1912; pp. 215-229*; $1.15. Abstract in Electrician, May24, 1912; p. 285; 3000 w; 35c.

Edwards, Geo. E.—*The Ilgner System in Electric Hoisting Operations.*—Mining & Engg. World, May11,1912; p. 989; 3500 w*; 10c.

Gascovne, R.—*Electrical Hoisting Plants on the Rand;* [Ward-Leonard vs. 3-phase].—Mining & Engg. World, Feb.10,1912; p. 342; 3000 w; tables; 10c.

Haar, S.—*The Control of Electric Mine Hoists.*—Gen. Electric Rev., May,1912; 7

pp*; 35c. Abstract in Engg. Mag., July, 1912; p. 604; 1600 w*; 35c.

Heather, H. J. S.—*Control of Induction Motor Hoists;* [Read to British Instn. of Electr. Engrs., May.1911; abstract].—S. Afr. Mng. Jnl., June3,1911; p. 585; June24, p. 701; 6000 w*; 50c. Also in Electrician, Nov.10,1911; p. 177; 1600 w*; 35c. Also in E. & M. J., March23,1912; p. 589; 1500 w*; 25c.

Heather, H. J. S.—*Comparisons of Winding Costs;* [Ward-Leonard vs. 3-phase systems; remarks on Renner's paper before S. Afr. Inst. Electr. Engrs.].—S. Afr. Mng. Engrs., Dec.2,1911; 2000 w; 35c.

Hodges, C. B.—*Air, Electric and Mule Haulage.*—Coal Age, Feb.3,1912; p. 541; 2500 w*; 20c.

Hudspeth, H. M.—*Electric Hoisting in Upper Silesia;* [Read to N. of Engl. Inst. of Mng. & Mechl. Engrs.; abstract].—Coal Age, March23,1912; p. 780; 1000 w*; 20c.

Hunter, A. D.—*Electric Winding;* [Thury vs. Ilgner and Ward-Leonard control].—Iron & Coal Trades Rev., Apr.19,1912; p. 608; 500 w; 35c.

Ilgner, Karl.—*Ilgner Anlagen und ihre Wirtschaftlichkeit;* [The Ilgner hoisting system and its industrial efficiency; read to Oestr. Ingr. & Archt. Ver., Elektrotechnik section].—Elektrotechnik & MaschBau, March24,1912; p. 256; 2000 w; 35c.

Laird, Jas. R.—*Electricity Applied to the Scottish Shale Oil Industry;* [Chiefly in haulage; read to Asso. of Mng. Electr. Engrs.; W. of Scotland branch].—Iron & Coal Trades Rev., March15,1912; p. 412; 2500 w*; 30c.

Lechat, V.—*Machine d'extraction électrique;* [Electric hoist at the Kessales colliery, Belgium].—Annales d. Mines (Belg.), 1912, No. 1; p. 168; 1200 w*; 95c.

Leerberg, N.—*The Coming System of Mine Haulage;* [Discusses requirements for efficiency in electric motor haulage].—Iowa Engr., May,1912; p. 287; 1200 w*; 30c.

Leerberg, N.—*Power Requirements for Electric Hoists;* [In Iowa coal fields].—Iowa Engr., May,1912; p. 324-329; 1500 w*; 30c.

Low, V. F. S.—*Impressions Gathered While Traveling;* [A. E. G. works at Berlin; Ilgner hoist near Carnap, Germany].—Australian Mng. Standd., Feb.15,1912; p. 151; Feb.22, p. 175; 5000 w*; 50c.

McDonald, P. B.—*Electric Hoist at Negaunee Mine;* [Cleveland Cliffs Co. iron mine, Mich.].—E. & M. J., Feb.24,1912; p. 395; 750 w*; 25c.

Moldenhauer, E. — *Wirtschaftliche Schachtförderung aus grossen Teufen;* [The problem of economic hoisting from great depths, and comparison of steam vs. electricity].—Glückauf, Dec.16,1911, p. 1948-1961; Dec.23, pp. 1981-1992*; 75c.

Abstract of a dissertation; Essen, 1911; 38 pp.; 37 figs.; $1.

Mountain, W. C.—*Electric Haulages in Mines;* [Read to Asso. of Mng. Electr. Engrs.; N. of Engl. branch].—Iron & Coal Trades Rev., March1, p. 334; June21, p. 1000; 10,000 w*; 50c. Abstract in El. Rev. (London), Apr.15, p. 537; 3000 w; 35c.

Nordberg, B. V.—*Mine Hoisting Systems Compared;* [Steam vs. air vs. electricity].—E. & M. J., May18,1912; p. 993; May25, p. 1035; 9000 w; 40c.

Paehr, —. *Experiences with Mine Locomotives, Dortmund* (in German).—See under Haulage, in "Mine and Mining."

Pauly, K. A.—*Electric Motors vs. Compressed-Air Engines for Driving Deep-Mine Hoists.*—Amer. Inst. Mng. Engrs., Bull. 60, Dec.,1911; pp. 923-951*; $1.15.

Abstract in Engg. & Contractg., Jan.3, 1912; p. 7; 4000 w*; 25c.

Rektenwald, J.—*Elektrisch betriebene Fördermaschinen;* [Industrial economy and efficiency of modern electric hoists].—Berg- & Hüttenm. Rundschau, March20,1912; p. 130; 2500 w; 35c.

Rice, S.—*Progress in the Coeur d'Alene District, Idaho;* [Includes notes on economic electric hoisting].—Mining & Engg. World, June8,1912; p. 1185; 2500 w*; 10c.

Schulz, E.—*Elektrisch betriebene Hauptschacht-Fördermaschinen;* [Electric hoists for central hoisting shafts in Germany and France; from A-E-G Ztg.].—Erzbergbau, Dec.15,1911, p. 330; 2400 w*; 35c. Also in Montanist. Rundschau, Dec.16, p. 1149; 2700 w*; 45c.

Siemens, G.—*Die elektrische Lokomotivförderung mit einphasigem Wechselstrom auf der Zeche Rosenblumendelle;* [Electric haulage engine for single-phase alternating current at the Rosenblumendelle colliery, Germany].—Glückauf, Dec.9,1911, p. 1905-1911*; Dec.16, p. 1941-1948*; 75c.

Strauss, A.—*Elektrisch betriebene Hauptschacht-Fördermaschine;* [Notes on electric hoists].—Bayer. Ind. & Gewerbebl., 1911, No. 47; pp. 461-465*; 75c.

Taite, Chas. D.—*Lancashire Electric Power Co.'s System and Its Application to Lancashire Collieries;* [Includes discussion of electricity vs. compressed air for haulage; read to Manchester Geol. & Mng. Soc.].—Iron & Coal Trades Rev., March15, 1912; p. 410; March22, p. 455; 6000 w*; 50c. Also in Coll'y Guardn., March22,1912; p. 579; 6000 w*; 30c.

Tupper, C. A.—*Electrical Mine Hoists and Their Control.*—Mining & Engg. World, March30,1912; p. 699; Apr.6, p. 751; 7500 w*; 20c.

Viannay, —. *Nouvelle machine d'extraction à courant monophasé;* [A new single-phase hoist].—Soc. de l'Ind. Minrl. St. Etienne, C-R., Oct.,1911, p. 569; 1000 w; 75c.

Wendriner, —. *Erfahrungen bei der maschinellen Streckenförderung auf den Steinkohlenbergwerken Oberschlesiens;* [Experience with combustion and electric locomotives and cable haulage in Upper Silesian coal mines].—Zts. f. d. Berg-, H-, & Salinenwesen, Vol. 59, No. 5; 1911; pp. 673-694*; $1.15.

Wille, H.—*Versuche an einer elektrisch betriebenen Hauptschachtförderanlage mit Schwungradausgleich;* [Tests of an electric mine hoisting plant with flywheel equalizer].—Ver. Deu. Ingr., Zts.; March 2,1912; pp. 333-344*; 75c.

English abstract by L. Crouch in Engg. Rev., June15,1912; p. 487; 1000 w*; 35c.

Wood, B.—*Electrically-Driven Winding Engines;* [Read to Victorian Inst. of Electr. Engrs.].—Australian Mng. Standd., Nov.30, 1911; p. 553; Dec.7, p. 579; Dec.14, p. 600; 7000 w*; 65c.

Verein Deutscher Ingenieure. — *Untersuchungen elektrisch und mit Dampf betriebener Fördermaschinen;* [Tests of electric vs. steam driven hoists for power consumption]. — Glückauf, Oct.21,1911, pp. 1629-1640*; Oct.28, pp. 1675-1681*; Nov. 4, pp. 1709-1724*; Nov.11, pp. 1755-1764*; Nov.18, pp. 1797-1801; Nov.25, pp. 1830-1838*; Dec.30, pp. 2021-2031*; $2. Also published separately, Berlin, 1911; pp. —; $1.

Abstract in Elektrotechnik & Maschinenbau, Jan.28,1912; p. 83; 500 w; tables; 45c.

English abstract in Coll'y Guardn., Marcn1, p. 426; March15, p. 532; 2500 w; 50c.

———. *A Relay Controller for Electric Mine Haulage;* [Laurence, Scott Co. English design].—Coal Age, Jan.13,1912; p. 453; 800 w*; 20c.

———. *Electric Haulage for Mines;* [British Thomson-Houston Co. locomotives; their principles].—Iron & Coal Trades Rev., Jan.5,1912, p. 20; 1800 w*; 30c.

———. *Electric Hoist at Calumet & Arizona, Bisbee, Ariz.*—E. & M. J., Jan.20, 1912; p. 162; 1000 w*; 25c. Also in Mines & Minerals, March, p. 485; 1000 w*; 35c.

———. *Electric Power Underground;* [Underground hoist at New Heriot mine, Rand].—Salt Lake Mng. Rev., Jan.30,1912; p. 27; 1000 w*; 25c. Also in Mng. Sci., Feb.8; p. 155; 1000 w; 20c.

———. *Electric Sinking Hoist at Cinderella Deep Consol. Mine.*—S. Afr. Engg., Dec.,1911, p. 103; 1000 w*; 35c. Also in E. & M. J., Jan.27,1912; p. 205; 1000 w; 25c. Also in Mines & Minerals; May,1912; p. 624; 1200 w; 35c. Also in Mex. Mng. Jnl., June, p. 42; 1100 w.; 25c.

———. *Electric Winding Gear at the West Rand Consol. Gold Mines.*—Engnrg., Dec.8,1911, p. 760; 1200 w*; 35c. Also in Electrician, Jan.121912; p. 557; 1000 w*; 35c. Also in El. Rev. (London), March8, u. 388; 2000 w*; 35c.

———. *Electrical Winding Hoists in the Transvaal;* [Ward-Leonard vs. 3-Phase system].—Australian Mng. Standd., Feb.22. 1912; p. 173; 1800 w; 35c.

———. *Hlektrisch betriebene Hauptschachtfördermaschine;* [A. E. G. Ilgner system of electric hoisting].—A. E. G. Ztg., No. 5, 1911; pp. 1-6*; 50c.

———. *Gewicht und Ausrüstung von Grubenlokomotiven und deren Berechnung;* [Determining the weight and equipment of mine locomotives].—El. Kraft Betr. & Bahnen, 1912, No. 6, pp. 113-116; 75c.

———. *New method of Electric Winding at the Auchincruive Pits of Messrs. Wm. Baird & Co.*—Iron & Coal Trades Rev., Apr. 5,1912; p. 534; 2000 w*; 35c.

———. *The West Rand Electric Hoists.*—S. Afr. Mng. Jnl., March16,1912; p. 73; 1000 w*; 35c.

MISCELLANEOUS AND GENERAL APPLICATIONS (IN MINING)

Armstrong, F. H.—*Electrical Operation of the Plants of the Penn Iron Mining Co., Vulcan, Mich.;* [Chiefly hoists; also pumps and compressors].—Lake Superior Mng. Inst., Proc., 1911; pp. 244-250*.

Bardeen, H. A.—*Bardeen Electric Rotary Drill; New Well-Boring Apparatus.*—Oil Age, March8,1912; p. 2; 1000 w*; 20c.

Barnes, H. B.—*The Progress of the Electrical Industry;* [Developments in hoisting, pumping, lighting, haulage, general equipment].—Mng. Sci., Jan.25,1912; p. 86; 4000 w*; 25c.

Binder, L.—*Ueber Wärmeübergang auf ruhige oder bewegte Luft sowie Lüftung und Kühlung elektrischer Maschinen;* [Heat transmission and radiation in stationary and mobile atmospheres, and the ventilation and cooling of electrical machinery].—Halle 1912; 116 pp.; 45 figs; $2 (book).

Clark, H. H.—*Symbols to Designate Electric Installations on Mine Maps;* [Lead to Coal Mng. Inst. of Amer., Dec., 1911].—Coal & Coke Op., Dec.28,1911, p. 417; 2100 w*; 25c. Also in Mining & Engg. World, Dec.30,1911, p. 1329; 2100 w*; 10c. Also in Coal Age, Dec.30,1911, p. 366; 2100 w*; 20c. Also in Engg. News, Feb.15,1912, p. 300; 1200 w*; 25c. Also in Mines & Minerals, March, p. 473; 1500 w*; 35c. Coal Mng. Inst. of Amer. Proc. for 1911; 1912; pp. 308-320*.

Edwards, Geo. E.—*Electrification of the Penn Mines, Menominee Range, Mich.*—Mining & Engg. World, March16,1912; p. 593; 2500 w*; 10c.

Gillespie, Jas.—*The Operation of Electrical Apparatus in Mines by Remote Control;* [Read to Asso. of Mng. Electr. Engrs., E. Scotland branch].—Iron & Coal Trades Rev., Apr.12,1912; p. 566; 3000 w*; 35c.

Discussion, I. & C. T. R., May17, p. 808; 2800 w; 35c.

Gold, K.—*Ueber Bagger mit elektrischem Betriebe;* [Some European dredges, scrapers, and shovels operated electrically].—Montanist. Rundschau, Jan.16,1912; p. 57-62; 3000 w*; 45c.

van der Ham, A.—*Elektrotechnische Skizzen aus dem Diamantbergbau Südafrikas;* [Applications of electricity in diamond mining in German S. W. Africa].—E. T. Z., Feb.1,1912, pp. 101-104*; 75c. Abstract in Elektrotechnik & Masch Bau, March17, 1912, p. 231; 750 w; 35c.

Henry.—*L'électricité dans les charbonnages en Amérique;* [Applications of electricity in collieries in America].—Ind. Electriq., March25,1912; pp. 127-135*; April10, pp. 155-158*; 95c.

Hirschberg, C. A.—*Winter Operations in a Quarry;* [Electric air drills at Buffalo Cement Co. plant, N. Y.].—Compr. Air Mag., June,1912; p. 6449; 1200 w*; 25c.

Kändler, H.—*Elektrischer Gesteinsbohrhammer für Bauzwecke;* [Püschel electric hammer drill].—Oestr. Ingr. & Archt. Ver., Zts.; March22,1912; p. 186; 500 w*; 35c.

Liston, J.—*Electric Power in Eastern Iron Ore Mines;* [Mineville, N. Y.].—Iron Trade Rev., March21,1912; p. 649; 3200 w*; 20c.

Liwehr, Eug.—*Pressluft und Elektrizität im Grubenbetrieb;* [Compressed air vs. electricity in mines].—Montanist. Rundschau, May16,1912; p. 449; 2500 w*; 35c.

Liwehr, E.—*Ist die Stangenabbauschrämmaschine geeignet die Radschrämmaschine zu verdrängen, und welches sind die hier in Frage kommenden Wertigkeitverhältnisse zwischen elektromotorischem Antrieb und dem Betriebe mittels komprimierter Luft;* [Punching vs. circular coal cutters—Oestr. electricity vs. compressed-air drills,1912; p. Ingr. & Archt. Ver., Zts., F[illegible] 108; 1000 w; 35c.

Martin, Al. H.—*Electric Equipment of California Dredges.*—Mining & Engg. World, Dec.16,1911, p. 27; 1000 w; 10c.

Sanio, P.—*Der Arbeitsverbrauch des elektrischen Tag[illegible] stripping and power mands of elec[illegible] Kraftbetriebe & Bahshovels].—Elek[illegible] pp. 41-44; 75c. Abstract nen. Jan.24,[illegible]nik & Masch Bau, March10, in Elektrot[illegible]; 500 w; 35c.

1912; p. [illegible] B.—*Coal Cutting Machinery;* Shaw, W. B.—*Coal Cutting Machinery;* [Review of various types, and merits of electricity vs. compressed air; read to Manchester Assn. of Engrs.; abstract].—Iron & Coal Trades Rev., Dec. 1,1911, p. 879; 7000 w*; 35c.

Also in Mechl. World, Dec.1. p. 258; Dec. 15, p. 279; Jan.5,1912; p. 8; Jan.26, p. 39; 7000 w*; 80c. Also in Scl. & Art. of Mng.,

Dec.9, p. 198; 2000 w; 35c. Also in Electrician, Dec.22, p. 420; 4000 w; 35c. Also in S. Afr. Engg., Dec., p. 109; 4500 w*; 35c. Also in Mng. Engg., Jan.,1912, p. 280; Feb., p. 307; 7000 w*; 50c. Also in Coll'y Guardn., Feb.2, p. 52; March8, p. 479; March15, p. 527; March22, p. 584; 7000 w*; 30c. Also in Mining & Engg. World, March23, p. 662; 500 w*; 10c.

Discussion before Notts. & Derbyshire, S. Wales, etc., branches, in Ir. & Coal Tr. Rev., May10, p. 764; 2000 w*; 45c.

Thornton, W. M.—*The Use of Electricity in Coal Mines;* [Lecture at Miners' Institute, Eldon colliery].—Coll'y Guardn., Feb. 9,1912, p. 281; 1500 w; 30c. Also in Iron & Coal Trades Rev., Feb.9,1912; p. 214; 2500 w; 30c.

Weingrün, J.—*Elektrischer Antrieb der Baumanchinen bei der Kanalisation der Weichsel;* [Electric operation of the cranes, concrete mixers, pumps, rams, drills, and other machinery in canalizing the Weichsel river].—Elektrotechnik & Masch-Bau, Jan. 21,1912, p. 56; 3000 w*; 35c.

Willis, R. H.—*The Mechanical Design of Electrical Plant in Collieries;* [Read to Asso. of Mng. Electr. Engrs.; E. of Scotl. branch].—Iron & Coal Trades Rev., March 1,1912, p. 338; 1200 w; 30c.

———. *Abnahmeversuche an einem elektrish angetriebenen Kolbenkompressor;* [Tests of an electric-driven reciprocating compressor at Bielschowitz, Silesia].—Oberschles. Berg- & Hüttenm. Ver., Zts.; April,1912; p. 141; 2500 w*; 45c.

———. *Benefit of Standardizing Mine Electric Equipment.*—Black Diamond, Apr. 27,1912; p. 21; 1600 w; 30c.

———. *Electrical Equipment, D. L. & W. Mines, Pa.*—Coal Age, March16,1912; p. 742; 2100 w*; 20c. Also in Coal & Coke Op., March21, p. 190; 2100 w*; 20c. Also in Mines & Minerals, June, p. 657; 2000 w*; 35c.

———. *Electrical Equipment of the Craighead and Bothwell Castle Collieries, Scotland.*—El. Rev. (London), Jan.5,1912; p. 21; 500 w*; 35c.

———. *Electrical Plant at the Buxton Lime Firms' Quarries;* [Derbyshire].—El. Rev. (London); Jan.12,1912; p. 59-63*; 3000 w; 35c. Also in Stone Trades Jnl., April,1912; p. 1105; 3000 w*; 35c.

———. *Electrification of a Fifeshire Colliery;* [Townhill (Dumferline) Colliery, Ltd.].—Iron and Coal Trades Rev., March1, 1912, p. 342; 500 w*; 30c.

———. *Mayle Block Coal Co., Des Moines, Iowa;* [Mine and power plant: single motor haulage system].—Electr. Mng., April,1912; p. 29-42*; 20c.

———. *The Engineer in the Mine;* [Responsibility of electrical engineers in Transvaal mines].—El. Rev. (London), Feb. 16,1912; p. 241; 1500 w; 35c.

ACCIDENTS; SAFETY AND RESCUE

See also Hygiene, etc., Chapter 9.

Carlow, C. A.—*Lessons to Be Learned from the Electrical Mining Accidents in Scotland in* 1910; [Read to Natnl. Asso. of Coll'y Managers, and to Asso. of Mng. Electr. Engrs.].—Iron & Coal Trades Rev., Dec.1, pp. ——; Feb.16,1912; p. 246; 10,000 w; 50c.

Couriot, H. and J. Meunier.—*Phénomènes spéciaux accompagnant la rupture des filaments incandescents dans les mélanges d'air et de gaz combustible;* [Studies on the effect of rupture of incandescent filaments in mixtures of air and combustible gases].—Génie Civil, Feb.3,1910; p. 224; 4500 w*; 50c.

Dobbelstein, O.—*Die Unfallgefahr bei der Schiessarbeit mit elektrischer Zündung und mit Zündschnurzündung;* [The liability to accident in electric vs. fuse blasting].—Glückauf, Apr.13,1912; p. 594; 1200 w; tables; 45c.

Dupuy, J.—*Emploi dans les mines grisouteuses de divers types d'exploseurs électriques;* [Decree of Feb.23,1912, governing the use of electrical exploders in French coal mines; with descriptions of permitted types].—Annales d. Mines, April,1912; p. 213-227*; 75c.

Hammond, E. K.—*Safeguards for Electric Cranes.*—Iron Age, May30,1912; p. 1336; 1600 w*; 30c.

Kopplin, —. *Gefährdung der Schiessarbeit mit elektrischer Zündung durch den elektrischen Grubenlokomotivbetrieb;* [Dangers of electric shooting in mines using electric haulage].—Glückauf, May25,1912; p. 821-824*; 50c.

Lauffer, C. A.—*Electrical Accidents and Their Treatment;* [From "Electric Journal"].—Amer. Industries, Sept.,1911; p. 19; 2200 w; 35c. Also in Australian Mng. Standd., Nov.9,1911; p. 470; 2100 w; 35c. Also in Practl. Engr., Jan.15,1912; p. 69; 2000 w; 25c.

Spanish abstract in Mex. Mng. Jnl., June, 1912; p. 60; 2000 w; 25c.

Lemaire, Em.—*Inflammation du Grisou pa les filaments incandescents des lamps électriques;* [Framéries Experiment Station Tests on the inflammability of firedamp by the incandescent filaments of electric lamps].—Annals d. Mines (Belgiq.), 1911, No. 2; pp. 321-367*; 90c.

Summary in English in Iron & Coal Trades Rev., Sept.8,1911; p. 365; 3000 w; 30c. Also in Mng. Engg., Oct.,1911; p. 212; 2500 w*; 30c. Also in Coal Age, Jan. 20,1912; p. 478; 3500 w; 20c.

Also in Spanish in Rev. Minera, Aug.1, 1911; p. 421; 4000 w; 50c.

Mountain, W. C.—*Mining Electricity Rules;* [British regulations; lecture to Midland colliery managers].—Iron & Coal Trades Rev., Jan.12,1912, p. 60; 3200 w; 30c.

Nelson, A.—*Method of Restoring Consciousness after Electric Shock.*—Sci. & Art of Mng., Dec.23,1911, p. 236; 1000 w*; 35c.

Phelps, H. M.—*Safeguarding the Use of Electricity in Mines.*—Coal Age, May11, 1912; p. 1006; 1500 w; 20c.

Thornton, W. M.—*Influence of Gas on Ignition of Coal Dust by Single Flashes;* [Presidential address; N. of Engl. branch of Asso. of Mng. Electr. Engrs.].—Iron & Coal Trades Rev., Dec.1.1911, p. 894; Feb. 16, p. 253; 2500 w*; 50c. Also in Coal Trade Bull., Dec.15.1911, p. 44; 2100 w; 25c. Also in Electrician, Dec.8, p. 343; 2000 w*; 35c.

———. *Dispositifs de sectionnement automatique pour la protection des usines d'électricité contre les arrêts de service;* [Prevention of complete shut down of power plant by interruptions along the line; automatic switches cutting out affected blocks].—Industrie Electriq., Apr.25,1912; pp. 180-185*; 75c.

———. *Electricity and Coal Dust;* [Reviews discussion on Thornton's paper].—El. Rev. (London), Dec.15,1911, p. 970; 1400 w; 35c.

———. *Electricity and Firedamp;* [Discusses proposed English coal-mines bill].—El. Rev. (London), Dec.8,1911, p. 929; 2200 w; 35c.

———. *Equipping a Mine to Overcome a Bad Record;* [Electrification of gaseous Harwick colliery, Cheswick, Penn.].—Black Diamond, Jan.6,1912; p. 15; p. 30; 2000 w*; 30c.

———. *Installation and Use of Electricity in Mines;* [Text of new British rules].—Coll'y Guardn,. March1,1912; p. 431; 2000 w; 30c. Also in Iron & Coal Trades Rev., Feb.23, p. 280; 2500 w; 30c.

———. *Protective Devices Required Under the New Electrical Rules;* [British; leakage indicators for high and low tension; waterproof ammeters; spark gap; lightning arrester].—Coll'y Guardn., March 1,1912; p. 428; 1000 w*; 30c.

———. *Some More Electrical Don'ts.*—Coal Age, Jan.20,1912; p. 487; 1500 w; 20c.

MISCELLANEOUS AND GENERAL APPLICATIONS (IN MILLS AND TRANSPORTATION)

For lifting magnets see also Transportation, Chapter 13.

Ablett, C. A.—*Some Modern Developments in the Electric Driving of Rolling Mills;* [Abstract; read to Cleveland (U. K.) Instn. of Engrs.].—Iron & Coal Trades Rev., Dec. 15,1911, p. 969; 2200 w; 30c.

Ahrens, A. S.—*The Power Requirements of a Steel Tube Mill;* [Discusses electrical driving at Spang-Chalfant mill, Pittsburgh; from El. Jnl.].—Iron Trade Rev., Dec.21, 1911, p. 1099; 3200 w*; 25c.

Broughton, H. H.—*Electric Cranes; Their Design, Construction and Application.*—London, 1911; pp. —*; $7.50 (book).

Davidson, R. N.—*Electrical Equipment of a Nevada Smelter;* [Mason Valley Mines Co. plant at Thompson].—Jnl. of El'y Power & Gas, Apr.20,1912; p. 349; 1000 w*; 35c.

Euler, —. *Untersuchungen eines Zugmagneten für Gleichstrom;* [Tests of a direct-current lifting magnet].—Elektr. Bahnen, Dec.14,1911, p. 701-710*; 75c.

Finzi, L.—*Sui magneti di sollevamento;* [Lifting magnets].—Met'l'gia Ital., Dec., 1911; pp. 782-795*; 45c.

Friedländer, E.—*Electric Cranes for Steel Mill Service;* [Read to Iron & Steel Electr. Engrs., N. Y.; abstract].—Canadian Engr., May9,1912; p. 627; 2700 w; 25c. Also in Mechl. World, Dec.8,1911; p. 273; Dec.22, p. —; 2700 w; 50c. Also in Australian Mng. Standd., Apr.25,1912; p. 383; May2, p. 406; 3000 w; 50c.

Gjessing, O.—*The Operations of Electric Ore Roads in Sweden.*—Mining & Engg. World, May25,1912; p. 1085; 2000 w*; 10c.

Heym, W.—*Die Anwendungen der Elektrizität in Grubenbetrieben;* [Applications of electricity in mining; VI: Stamp-mills, fans, telephones, transmission and wiring].—Kali, Erz & Kohle, Jan.15,1912; p. 51; 2800 w; 35c.

Jansen, —. *Elektrischer Antrieb von Brikettpressen mittels Drehstromkollektormotoren;* [Electric-drive for briquetting presses with alternate-current collector motors].—Braunkohle, Sept.1,1911, p. 338-344*; 50c.

Abstract in Montanist. Rundschau, Jan.1, 1912; p. 23; 500 w; 45c.

Ketzler.—*Pufferbetriebe für elektrisch betriebene Aufzüge, Krane und dergleichen Einrichtungen mit intermittierendem Betriebe;* [Intermittent boosters for electric hoists, cranes, etc].—E. T. Z., Apr.11, p. 366-368*; 50c.

Lake, W. H.—*The Electrification of the Shelton Mills;* [Read to Staffordshire Iron & Steel Inst.].—Iron & Coal Trades Rev., Dec.22,1911, p. 1007; 5500 w*; 30c.

McCormick, B. T.—*Electrification of a Reversing Mill of the Algoma Steel Co.;* [Sault Ste. Marie, Ont., Canada].—Amer. Inst. Electr. Engrs., Proc., Apr.,1912; p. 297-305*; $1.15. Abstract in Electrician, June7, p. 350; 2000 w*; 35c.

Pfiffner, —. *Die Berechnung von Lasthebemagneten;* [Computations for lifting magnets].—E. T. Z., Jan.11,1912; pp. 29-33*; Jan.18, pp. 57-60*; 75c.

Roberts, S. S.—*Power Requirements of Rolling Mills;* [Instruments for heavy loads and limited speed variations].—Iron Age, Jan.4,1912; p. 17; 4000 w*; 65c.

Ryerson, W. N., and J. B. Crane.—*Notes on the Use of Alternating Current in Unloading Coal;* [Describes piers and cranes at Duluth-Superior Harbor, Minnesota].—Amer. Inst. Electr. Engrs., Proc; March, 1912; pp. 231-244*; $1.15.

Abstract and editorial discussion in Electrician, May3,1912; p. 136; p. 144; 5000 w*; 35c. Also abstracted in Iron Age, May16; p. 1222; 750 w; 30c.

Selter, —. *Ueber die Entwickelung der Transportvorrichtungen mit Lastmagneten in Deutschland;* [Development of lifting magnets in Germany].—Centralbl. d. Hütten & Walzwerke, Feb.5,1912; p. 61; Feb. 15, p. 159; 4000 w*; 50c.

Vogel, W.—*Elektrische Ausrüstungen auf Hebe- und Transportmaschinen;* [Electrical equipment of hoisting, lifting and transporting machinery; desirable qualities, specifications, etc.].—Oberschles. Berg- & Hüttenm. Ver., Zts.; Feb.,1912; p. 59-62; 3000 w; 45c. Also in Oberschles. Elektrotechn. Ver., Mittlngn., March20, p. 78; 2400 w; 45c.

———. *Eine Umkehrwalze für Bleiblechfabrikation;* [Transforming a steam to electric drive in rolling mill].—Dingler's Polyt. Jnl., May4,1912; pp. 285-286*; 50c.

———. *Electricity in Foundries.*—El. Rev. (Chicago), June8,1912; p. 1095; 3600 w*; 25c.

———. *Electrical Equipment of Gary Coke Plant;* [8,000-ton by-product plant of Indiana Steel Co.; handling, etc., apparatus].—Iron Age, Dec.28,1911, p. 1406; 2500 w*; 30c. Also in Iron Trade Rev., Dec.21, 1911, p. 1093; 2500 w*; 25c.

———. *Electric Operation of German Cement Factories;* [Bonner works near Obercassell].—Cement Age, March,1912; p. 134; 1000 w*; 35c.

In German in Ton-Industrie Ztg., March 23, p. 515; 1000 w*; 35c.

———. *Model Ore Handling Plant;* [Electrical cranes and power plant for unloading iron-ore vessels at Philadelphia].—Salt Lake Mng. Rev., March30,1912; p. 15; 1500 w*; 25c. Also in Iron Trade Rev., Apr.4, p. 749; 1500 w*; 20c.

———. *New Electrical Crane Installation at the Grimsby Docks.*—El. Rev., Dec. 29,1911, p. 1068; 500 w*; 35c.

MAGNETIC AND ELECTROSTATIC ORE-DRESSING

See under "Concentration," Chapter 10.

MISCELLANEOUS

Clough, F. H.—*High Speed Electrical Machinery;* [Read to [illegible] Engg. Soc., abstract].—Iron & Coal Trades Rev., Apr.5, 1912; p. 540; [illegible]; Also in Electrician, Apr. [illegible]; 35c.

Abstract in [illegible] Guardn., Apr.26, p. 8[illegible]

Czeija.—*Entwickelung der [illegible]* [illegible] *maschinen.*

devices for high-speed dynamos].—E. T. Z., March28,1912; pp. 313-316; Apr.4, pp. 343-347*; 75c.

Dettmar, Georg.—*Statistik der Elektrizitätswerke in Deutschland;* [Statistics of the electrical works in Germany, Aprill, 1911].—Berlin, 1911; 330 pp; $2.50 (book).

Murdoch, W. H. F.—*The Ventilation of Electrical Machinery.*—London, 1911; pp. vi, 79; $1.25; (book).

Phillips, H. M.—*The Selection of Electrical Apparatus; II; Conditions Governing Efficiency.*—Cassier's Mag., March,1912; p. 245; 6000 w; 35c.

Pohl, Rob.—*Notes on National and International Standards for Electrical Machinery;* [Read to British Instn. of Electr. Engrs.; abstract].—Engnrg., Jan.26,1912; p. 130; 9000 w*; 30c.

Combustion Engines

OIL AND GAS ENGINES FOR POWER

See also "Gas Producers;" see also under "Petroleum."

Askling, C. W. and B. Roesler.—*Internal Combustion Engines and Gas Producers.*—London, 1912; pp. —; $4 (book).

Baer.—*Untersuchung einer Torfgasanlage der Görlitzer Machinenbauanstalt und Eisengiesserei A. G.;* [Report upon tests of a peat producer-gas plant of the Görlitz Machine Works & Iron Co.].—Ver. Deu. Engr., Zts., Apr.6,1912; pp. 558-562*; 75c. Abstract in Elektrotechnik & Masch Bau. May12, p. 403; 500 w; 35c.

Bano, L.—*Oil Engines in a Hungarian Municipal Power Plant;* [at Torda, Transylvania; translated from Journal of the Hungarian Soc. of Engrs. & Archts. of Buda-Pesth].—Power, Apr.16,1912; p. 549; 2000 w*; 15c.

Bergner, H.—*Die Wirkungsweise und Konstruktion der ortsfesten Verbrennungskraftmaschinen;* [Operation and construction of stationary combustion engines, with special reference to gas turbines].—Leipzig, 1912; 178 pp.; 92 figs.; $1.50; (book).

Brookes, L. E.—*The Practical Gas and Oil Engine Handbook.*—Chicago, Ill.; 1911; 192 pp.; 50 figs.; $1.50 (book).

Bromley, C. H.—*Discipline for the Gas Engine;* [Points to be watched in keeping it in order].—Practl. Engr., March1,1912; p. 250; 2000 w*; 25c.

Bucher, W.—*Untersuchung über die Verbrennung methanhaltiger Gasgemische;* [Researches on the combustion of gas mixtures containing methane].—Berlin, 1912; 45 pp.; 20 figs.; $1 (pamphlet).

Champly, R.—*Gazogènes et moteurs à gaz pauvre à la portée de tous;* [Gas-producers and gas-engines and their everyday applications].—Paris, 1911; 200 pp.*; $2 (book).

Farwell, —. *Comparison of Commercial Economy of Gas Engines and Steam Turbines.*—Electr. World, Feb.3,1912; pp. 246-248*; 50c.

Fernald, R. H.—*The Gas-Power Field for 1911;* [Amer. Soc. Mech. Engrs.; annual address of chairman of gas-power section].—Jnl. of El'y Power & Gas, Dec.23,1911, p. 585; 2500 w; 35c. Also in Chemi. Engr., Jan.,1912, p. 15; 3200 w; 35c. Also in Engg. News, Jan.4, p. 24; 1800 w; 25c. Also in Mod. Engg., March, p. 205-209; 1800 w; 25c.

Goldingham, A. H.—*The Gas Engine in Practice and Practice.*—London, 1912; pp. [illegible] (book).

Heinz, C.—*Peat Gas-Producer and Peat Gas Engine;* [at Goerlitz machine works, Germany; abstract and translation from Stahl & Eisen, Aug.17,1911, p. 1359].—Met. & Chemi. Engg., May,1912; p. 283; 600 w*; 25c.

Hoeltje, —. *Die Kraftversorgung des Kleingewerbes durch Gas und Elektrizität;* [Gas versus electric power for the small industrial plant].—Dingler's Polytechn. Jnl., Jan.6,1912; p. 7-10; Jan.13, p. 25-29*; $1.

Junge, F. E.—*The Junkers Oil Engine.*—Power, Jan.23,1912; p. 117; 1000 w*; 15c.

Junge, F. E.—*Increasing the Capacity of Large Gas Engines.*—Power, March19,1912; p. 396; 4000 w*; 15c.

Kershaw, J. W.—*Elementary Internal Combustion Engines.*—New York,1912; 117 figs; 90c (book).

Kimball, G. H.—*What Is the Future of the Oil Engine in the United States?*—Engg. News, May30,1912; p. 1016; 1500 w; 25c.

Knowlton, H. S.—*An Analysis of Some Recent Gas-Engine Failures.*—Power, Dec. 26,1911, p. 954; 2400 w*; 15c.

Levin, A. M.—*Reversing Gas and Oil Engines.*—Power, April2,1912; p. 470; 4500 w*; 15c.

Lorenz, H.—*Theorie und Berechnung der Humphrey Gaspumpe;* [Principles and computations of the Humphrey internal-combustion pump].—Ver. Deu. Ingr., Zts., Nov.4,1911, p. 1962-1856*; 50c.

Mann, —., and Wüstefeld.—*Vergasung minderwertiger Brennstoffe;* [Gasification of low-grade fuels; waste products of coal mines, coke and gas works].—Glückauf, May25,1912; p. 830-834; 50c.

Mathot, R. E.—*Comparison of Gas, Oil and Steam Motive Powers;* [Installation and operating costs].—Power, March5,1912; p. 328; 1600 w; 20c.

Percy, P. C.—*A German Peat Gas Power Plant;* [Heinz producer and Görlitzer engine].—Power, Jan.9,1912; p. 53; 750 w*; 20c.

Setz, H. R.—*Oil Engines.*—Mechl. World, Dec.1,1911, p. 246; Dec.8, p. 267; Dec.22, p. 295; 3000 w*; 65c.

Strahl, G.—*Erd-, Mond-, Torf-, Blau-, und andere Gase;* [Natural, Mond, peat, oil and other gases and applicability in gas engines].—S. W. Deu. Industrie Ztg., May28,1912; p. 295; 2000 w; 35c.

Streeter, R. L.—*The Internal Combustion Engine in Modern Practice; V: Present Practice in Germany.*—Engg. Mag., Feb., 1912; p. 731-747; 5000 w*; 35c.

Ulbricht, T. C., and C. E. Torrance.—*American Practice in the Rating of Internal Combustion Engines.*—Sibley Jnl., April,1912; p. 279-288; 65c.

Ullmann, A., Jr.—*An Experience with an Otto Engine.*—Power, May14,1912; p. 694; 1000 w*; 15c.

Witz, A.—*Die Verwendung von Gasmotoren in Elektrizitätswerken;* [Application of gas engines in electric power plants; from Génie Civil, Nov.11,1911 (French)].—Elektrotechnik u. Maschinenbau, Jan.21, 1912, p. 61; 1000 w; 35c.

White, R. B.—*Oil Engines and Their Fuels.*—Well Drillers' News, April,1912; p. 2; 2500 w; 20c.

Young, Wm.—*The Humphrey Pump and Compressor.*—Canadian Engr., Dec.21,1911, p. 706; 2100 w; 25c.

F. H.—*Moteur à combustion à deux temps système Junkers;* [Compound combustion engine, Junkers type].—Génie Civil, Feb.10, 1912; p. 290; 1500 w*; 50c.

"R. H."—*Der Zweitakt Rohölmotor;* [The bi-contact crude-oil motor].—Centralbl. d. Hütten & Walzwerk, Jan.15,1912, p. 28; 1000 w; 35c.

———. *Oil vs. Steam Engines;* [Favors oil].—Practl. El'y & Engg., March, 1912; p. 313; 1800 w*; 25c.

———. *Rating of Petrol-Engines.*—Engnrg., Feb.2,1912; p. 156; 2500 w*; 30c.

———. *The Utilization of Crude Petroleum for Electric Power Generation;* [Oil gas-producers and electricity from gas-engines at Los Angeles, Cal.].—El. Rev. (London), Dec.8,1911, p. 934; 2600 w*; 35c.

DIESEL MOTORS

Blau, E.—*Bauarten von Sulzer-Dieselmotoren und deren Verwendung in ortfesten Klein- und Grossbetrieben;* [Sulzer types of Diesel engines and their application in stationary works, large and small].—Elektr. & Maschinenbau, Jan.7,1912, p. 1 (Suppl.); 3000 w*; 35c.

Chalkley, A. P.—*Diesel Engines for Land and Marine Work.*—London, 1912; pp. 238; $3 (book).

Diesel, R.—*The Present Status of the Diesel Engine in Europe and a Few Reminiscences of the Pioneer Work in America;* [Lecture delivered in America, April,1912].—St. Louis. Mo.; 1912; 48 pp*; 10c.

Abstract in Power, May28, p. 767; 1800 w*; 15c.

Diesel, Rud.—*The Diesel Oil Engine and Its Industrial Importance;* [Read to Instn. of Mechl. Engrs., March 15, 1912].—Engnrg., March22,1912; p. 395; 13,500 w*; 30c. Also in Iron & Coal Trades Rev., March22, p. 450; 6500 w*; 30c. Also in Electrician, March22, p. 966; 3000 w; 35c. Also in Engg. News, April4. 1912; p. 645; 7500 w*; 25c. Also in El. Rev. (London), April19, p. 655; 3000 w; 35c.

Diesel, Rud.—*The Present Status of the Diesel Engine;* [Lecture to Amer. Soc. Mechl. Engrs; abstract].—Power, May28, 1912; p. 767; 1800 w*; 15c.

Pöhlmann, —. *Neuere Rohölmotoren;* [Some newer tpyes of crude-oil motors].—Dingler's Polytechn. Jnl., Jan.13,1912; pp. —*; Jan.27, pp. 49-51*; Feb.10, pp. 81-87*; Feb.24, pp. —*; $1.50.

Reumaux, E.—*L'emploi des produits distillés de la houille dans le moteur Diesel;* [Use of coal tar and products in the Diesel engine].—Echo d. Mines, May27,1912; p. 618; 750 w; 35c.

Shannon, D. M.—*Some Aspects of Diesel Engine Design;* [Read to Instn. of Engrs. & Shipbuilders of Scotland].—Engnrg., May3, 1912; p. 605; 5500 w*; 35c. Also abstracted in Engg. Rev., May, p. 453; June, p. 489; 6000 w*; 50c.

Sowter, W. J. U.—*The Diesel Engine from the User's Standpoint;* [Read to British Instn. of Electr. Engrs., Dublin section; abstract].—Electrician, May 31,1912; p. 331; 3000 w; 35c. Also in El. Rev. (London), May31, p. 876; 2000 w*; 35c.

Supino, G.—*Motori Diesel;* [Diesel Motors].—Milan, 1911; pp. —; $1.50; (book).

Tosi, F.—*4-Cylinder, 4-Cycle Diesel Engines;* [Italian models].—Engnrg., May24, 1912; p. 696; 5000 w*; 35c.

Wickware, F. G.—*Utilizing the Waste Heat of Diesel Engines.*—Practl. Engr., June15,1912; p. 624; 1500 w; 35c.

———. *Notes on Maintenance of Diesel Engines.*—El. Rev. (London), Apr.19,1912; p. 657; 1200 w; 35c.

———. *The Mirrless-Diesel Oil Engine.*—Stone Trades Jnl., Feb.,1912; p. 1042; 2000 w*; 35c.

———. *The Oil-Engined Ship "Selandia"; Sulzer-Diesel Engines; and Notes on Developments in Marine Oil Engines.*—Engnrg., March8,1912; pp. 315, 317, 321; 4000 w*; 30c. Also in Power, Apr. 23, p. 585; 2000 w*; 15c.

GAS-TURBINES

Holzwarth, Hans.—*Dis Gasturbine;* [Gas turbines; theory; construction; tests of 2 gas turbines].—München, 1911; 165 pp. 140 figs.; $2.25; (book).

Holzwarth, H.—*The Holzwarth 1000-Hp. Gas Turbine.*—Power, Feb.6,1912; p. 191; 4000 w*; 20c.

Lange, J.—*The Gas Turbine;* [Translated from Stahl & Eisen].—Power, Feb.13,1912; p. 219; 2400 w*; 15c.

Lehne.—*Ein Beitrag zur Lösung des Gasturbinenproblems;* [Gas turbines and utilization of their exhaust heat].—Turbine, Apr.5,1912; p. 244-245*; 75c.

Semmler, C.—*Die Abwärmeverwertung bei Gasmaschinen;* [Utilization of waste heat in gas engines].—Dingler's Polytechn. Jnl., Jan.20,1912; p. —; 2500 w; 75c. Abstract in Elektrotechnik & Maschbau, Apr. 21,1912; p. 337; 500 w; 35c.

Ventou-Duclaux, L.—*Les turbines à gaz;* [The gas turbine].—Paris; 1912; 128 pp.; 57 figs; $1.25 (book).

———. *A 1000-Hp. Gas Turbine.*—Engg. News, Feb.1,1912; p. 196; 750 w*; 25c.

BLAST-FURNACE AND COKE-OVEN GAS ENGINES

Gouvy, —. *Utilization des gaz de hauts fourneaux;* [Utilization of blast-furnace waste gases: discussion before Nord & Pas-de-Calais Mining Congress, 1911].—Soc. de l'Ind. Minrl. St. Etienne, C-R., Oct.,1911; p. 580; 2400 w; 75c.

Hammond, E. K.—*The Utilization of Blast Furnace Gases;* [at American plants, especially Gary, Ind.; from the "Armour Engineer"].—Chemi. Engr., March,1912; p. 117; 4000 w*; 35c.

Langer, —. *Gas- oder Dampfbetrieb auf Hüttenwerken;* [Gas versus steam power in smelting works, foundries, etc.].—Stahl & Eisen, Dec.21,1911, pp. 2088-2094; 75c.

Tupper, C. A.—*Extensive Use of Coke-Oven Gas;* [European power installations using coke gas].—Coal Age, Apr.6,1912; p. 532; 2500 w*; 20c. Reprint in Power, May 21, p. 736*; 15c.

Tupper, C. A.—*A 15,000-Horsepower Coke-Oven Gas-Engine Plant;* [Eschweiler Mng. Co., near Aachen].—Iron Age, Dec.21, 1911, p. 1354; 2000 w*; 30c.

Tupper, C. A.—*Operating on Coke-Oven-Gas versus Steam Turbine* [at government collieries, Saarbrücken district, Germany].—Mining & Engg. World, Dec.23,1911, p. 1255; 4000 w*; 10c.

HAULAGE; HOISTING; TRACTION

See also "Motor Trucks" under "Transportation."

Bikoff and Doepp.—*De interna[illegible] Ausstellung von Verbrennungsmaschinen in St. Petersburg.* 1910.—International [illegible] tion of combustion engines at St. [illegible] burg. 1910]. Gasmotorentechnik, [illegible] 1911. pp. —; Dec., —; Jan.2, pp. 149-156*; Feb.[illegible].—*The Otto Internal-Combustion Locomotive;* [At [illegible] mines, Gelsenkirchen, Germany]. [illegible] p. 657; 1000 w. [illegible] J., March30, E. L.—*Methods of Driving* [illegible]

Chorlton

by Gas-Engines for Collieries; [Compares Mond producers and by-product coke ovens, and utilization of gas-engine power for mines; read to Midland Inst. of Mng., etc., Engrs.; abstract].—Iron & Coal Trades Rev., Dec.8,1911, p. 932; Dec.15, p. 961; 7000 w*; 50c. Also in Coll'y Guardn., Dec. 22, p. 1227; Dec.29, p. 1299; 7000 w*; 50c. Also in Mechl. World, Dec.22, p. 296; 1000 w*; 35c. Also in Mng. & Engg. World, Jan.20,1912, p. 112; 1000 w*; 10c. Also in Coal Age, April13, p. 876; May4, p. 973; 5000 w*; 30c. Also in Mng. Engg., May, 1912; p. 55; June, p. 78; 4000 w; 50c.

Degenhardt, W. R.—*Gas Engine at Sons of Gwalia Mine;* [Construction and operating costs].—W. Australia Chamber of Mines, Jnl., Dec.30,1911; p. 321; 2000 w*; 50c.

Dunlop, Jas.—*Gas-Engines for Colliery Power Stations;* [Comparisons with electricity].—Engnrg., Dec.29,1911, p. 8761; 750 w; 30c.

Fourmarier, —. *Traction par locomotive à benzine;* [Haulage by benzine locomotive at Horloz colliery, Belgium, and cost comparison with haulage by mules].—Annales d. Mines (Belgiq.), Vol. 17, No. 2; 1912; p. 439; 2000 w*; 95c.

Heldt, P. M.—*The Gasoline Motor.*—New York. 1912; 406 pp.; 323 figs.; 20 plates; $4 (book).

King, A. R.—*The Use of Gasoline Motors in Mines;* [Fead to W. Va. Coal Mng. Inst., June,1912; abstract].—Coal & Coke Op., June6,1912; p. 355; 1600 w; 25c. Also in Coal Age, June22, p. 1217; 1600 w; 20c.

Lucke, C. E. and S. M. Woodword.—*The Use of Alcohol and Gasolene in Engines.*—Practl. Engr., May,1912; p. 483; June, p. —; 15,000 w*; 40c.

Otte, —. *Versuche mit Motorlokomotiven auf der Grube Dechen im Saarrevier;* [Test of naphtha locomotive haulage at the Dechen colliery in the Prussian state mining district of Saar].—Zts. f. d. Berg-, H-, & Salinenw., Vol. 59, No. 5, 1911; pp. 739-768*; $1.15.

Paehr, — *Experiences with Mine Locomotives, Dortmund* (in German).—See under Haulage, in Chapter 9.

Perkins, F. C.—*Gasoline Locomotives for Underground Haulage.*—Mining & Engg. World, June15,1912; p. 1251; 1400 w*; 10c.

Perkins, F. C.—*Colliery Gas-Engine Plants.*—Mines & Minerals, Jan.,1912; p. 337; 1000 w.; 35c.

Rice, Stuart.—*Gas-Engine Power at French Mines and Smelters.*—Mining & Engg. World, May4,1912; p. 947; 2700 w*; 10c.

Sperlingk, H., and C. Jarrijon.—*Les locomotives à essence pour mines;* [Gasoline locomotives for mines and the question of atmospheric vitiation by fumes].—Echo d. Mines, Jan.18,1912, p. 77; Jan.25, p. 106; 750 w; 50c.

Wendriner, —. *Erfahrungen bei der maschinellen Streckenförderung auf den Steinkohlenbergwerken Oberschlesiens;* [Experience with combustion and electric locomotives and cable haulage in Upper Silesian coal mines].—Zts. f. d. Berg-, H-, & Salinenwesen, Vol. 59, No. 5, 1911; pp. 673-*; $1.15.

———. *Gas Locomotives for Mines;* [Faults with Otto engines].—Coal Age, E[illegible]7,1912; p. 521; 500 w; 20c.

———. *Locomotives de mines à moteur explosion système Turcat & Méry;* [Turcat-Méry gasoline mine locomotives].—Rev. Noire, Feb4,1912; p. 54; 2000 w*; 35c.

———. *Novel Gasoline Locomotives;* [Plymouth Motor Truck Co.].—Iron Age, Jan.18,1912; p. 191; 500 w*; 30c.

———. *Testing Gasoline Mine Locomotives.*—Mines & Minerals, Jan.,1912; p. 341; 700 w*; 35c.

———. *The Bituminous Gas Engine in South Africa;* [Producer and gas-engines at Groenfontein tin mines].—S. Afr. Mng. Jnl., Dec.16,1911; p. 521; 2200 w*; 35c.

———. *Ueber Motorlokomotiven;* [Benzine and liquid-fuel haulage locomotives in German clay pits, quarries, etc.]—Ton-Industrie Ztg., Apr.18,1912; p. 654; 1600 w*; 35c.

Compressed Air

COMPRESSORS; TRANSMISSION AND PLANT

Affelder, Wm. L.—*Air Compressor Explosions.*—Mines & Minerals, June,1912; p. 651; 1500 w*; 35c.

Aldcorn, T.—*The Production of Compressed Air;* [Read to Amer. Boiler Mnfrrs. convention. New Orleans, March,1912; abstract].—Ideal Power, Apr.,1912; p. 6; 1000 w*; 20c. Also in Iron Age, Apr.4, p. 856; 5000 w*; 30c. Also in Practl. Engr., May15, p. 512; 1500 w; 20c.

Bateman, G. C.—*Electric Heater for Air-Line Drains;* [at Cobalt, Ont.].—E. & M. J., Apr.27,1912; p. 831; 500 w; 25c.

Contzen, H.—*Messgeräte für Druck und Geschwindigkeit von Gasen und Dampfen;* [Meters for pressure and speed of gases and steam; supplementary to E. Stach's paper of 1911].—Stahl & Eisen, Apr.4,1912; p. 573; 1200 w*; 75c.

Garlick, C. H.—*Explosions in Air Compressors;* [From "Power"].—Ideal Power, Feb.,1912; p. 285; 1000 w; 15c.

Gunsaulus, E. N.—*Air Compressors in Transvaal Mines.*—U. S. Consul. Rep., May 4,1912; p. 478; 500 w; 20c.

Halleck, F. A.—*Air Compressor Economy in New York City.*—Mine & Quarry, March, 1912; p. 571; 4000 w*; 25c.

Holdsworth, F. D.—*Volumetric Efficiency of Air Compressors.*—E. & M. J., May25, 1912; p. 1028; 1600 w*; 25c.

Jones, J. W.—*Equal Work in 2-Stage Air Cylinders;* [From "Machinery," Jan.,1912].—Compr. Air. Mag., Feb.,1912; p. 6318; 1600 w*; 20c.

Köster, E.—*Pokorny & Wittekind Turbo-Compressors;* [Describes 4000-Hp. electrically driven compressors for Rand].—Engnrg., Dec.15,1911, p. 791; 2500 w*; 35c.

Van Langendonck, C.—*Horizontal Compound Air Compressors in English Colliery;* [New Robey compressor with disc-type air valves and circular double-beat steam valves].—Practl. Engr., June15,1912; p. 625; 1000 w*; 25c.

Macintire, H.—*Power in Compressed Air;* [Factors in transmission].—Mex. Mng. Jnl., May,1912; p. 38; 1200 w; 25c.

McGahey, C. R.—*Operating Air Compressors.*—Practl. Engr., Jan.15,1912; p. 82; 500 w*; 25c.

Nelson, A.—*Description of an Air Compressor in Use About Mines;* [Ingersoll-Sergeant].—Sci. & Art of Mng., May11,1912; p. 476; 1000 w*; 35c.

Ostertag, P.—*Theorie und Konstruktion der Kolben- und Turbo-Kompressoren;* [Theory and structure of reciprocating and turbo-compressors].—Berlin, 1911; pp. —; 266 figs; $4 (book).

Pernot, F. E.—*Work of Compression of One Pound of Air.*—Jnl. of El'y Power & Gas, June1,1912; p. 552; 100 w; table; 35c.

Rice, C. T.—*A Method of Hanging Air Pipes;* [Compressor connections in Michigan copper mines, in case of emergency]. —E. & M. J., Apr.13,1912; p. 735; 600

Richards, F.—*Development in Compressed-Air Power Storage;* [From "Amer. Machinist"].—Mining & Engg. World, Apr. 13,1912; p. 808; 1300 w; 10c.

Rix, E. A.—*Operation of Air Compressors.* —M. & S. P., Jan.6,1912, p. 13; 2200 w; 35c. Reprint in Compr. Air Mag., March,1912, p. 6355; 25c.

Schultze, —. *Mitteilungen über einige auf der bergtechnischen Ausstellung zu Essen ausgestellte Gegenstände;* [Some exhibits at the Essen Mining Exhibition; Demag 2-cylinder compound air compressor].—Bergbau, March14,1912; p. 150; 500 w*; 35c.

Serrure, R. T.—*Les filtres à air et leurs applications industrielles;* [Air filters and their industrial applications].—Fer & Acier, April,1912; p. 52; 3000 w*; 35c.

Sibley, R.—*Power Consumption of Rotary Air Compressors.*—Jnl. of El'y Power & Gas, March23,1912; p. 270; 1500 w*; 35c.

Sickles, E. C.—*Steam Driven Air Compressor Economies;* [From "Power"].—Compr. Air Mag., Jan.,1912; p. 6286; 750 w; 25c.

Smith, C. B.—*Power for Cobalt Mines, Cobalt, Ont;* [Includes notes on compressed-air piping by Cobalt Hydraulic Power Co.].—Asso. of Engg. Soc., Jnl, Jan., 1912; p. 56: 1200 w; 50c.
Abstract in Mng. & Engg. World, March 2, p. 503; 1200 w*; 10c.

Stanton, T. E.—*The Law of Comparison for Surface Friction and Eddy-Making Resistances in Fluids;* [Read to Instn. of Naval Architects, March,1912].—Engnrg., March29,1912; p. 437; 3000 w*; 35c.

Stone, S. R.—*Increasing the Efficiency of Air Compressors.*—Mining & Engg. World, May18,1912; p. 1039; 2500 w*; 10c. Abstract in W. Austalian Mng., etc., Jnl., June 29, p. 13; 1800 w; 45c.
Also in Chem'l, Met. & Mng. Soc. of S. Afr., Jnl., May, p. 489; 800 w*; 90c.

Teiwes, K.—*Kompressoren-Anlagen insbesonder in Grubenbetrieben;* [Compressor Plants, Especially for Mines].—Berlin, 1911; pp. —; 129 figs; $3 (book).

Vogel, E.—*Ueber die Temperaturänderung von Luft und Sauerstoff beim Strömen durch Drosselstelle bei 10°C. und Drucken bis 50 at;* [Temperature changes in gases and acids flowing through valves at 10°C. and at pressures of 50 atmospheres].—Berlin, 1911; pp. —; 75c; (pamphlet).

Weymouth, G. S.—*Measuring Air Quantities.*—W. Australia Chamber of Mines, Jnl.; Jan.,1912; p. 351; 1400 w*; 90c.
Abstract in M. & S. P., Apr.20, p. 562; 1400 w*; 20c.

Wightman, L. I.—*Regulation of Power Compressors.*—Practl. Engr., April1,1912; p. 351; 1100 w; 20c.

Wightman, L. I.—*The Compressed Air Plant for Mines.*—Practl. Engr., April1, 1912; p. 356; 1600 w; 20c. Reprint in Mining & Engg. World, April 6, p. 757, 10c. Also in Compr. Air Mag., May, p. 6424; 25c.

Woodhouse, B. M.—*Air Compressor Efficiency;* [Read to Rugby Engg. Soc.].—Mechl. World, Feb.2,1912; p. 51; Feb.9, p. 64; 4800 w*; 50c.

Young, Wm.—*The Humphrey Pump and Compressor.*—Canadian Engr., Dec.21,1911, p. 706; 2100 w; 25c.

Zerkowitz, —. *Beitrag zur Berechnung der Kompressoren auf thermodynamischer Grundlage;* [Compressor computations from a thermo-dynamic point of view].—Zts. f. Turbinenwesen, Dec.20,1911, pp. 548-552*; Dec.30, p. 564-568*; $1.20.

"Transmitter."—*The Design of Air Compressors.*—Mechl. World, Jan.19.1912; p. 31; Feb.16, p. 78; March22, p. 138; April5, p. 162; May10, p. 223; July12, p. 19; 14,000 w*; $1.05.

"W. H."—*Ueber Kompressoren;* [Notes on compressors].—Eisen Ztg., Jan.20,1912, p. 41; 1000 w; 35c.

Amer. Gas Inst. Committee.—*Gas Calorimetry;* [Report of progress in 1911].—Chem'l. Engr., Jan.,1912; p. 12; 2600 w; 35c.

———. *Abnahmeversuche an einem elektrisch angetriebenen Kolbenkompressor;* [Tests of an electric-driven reciprocating compressor at Bielschowitz, Silesia].—Oberschles. Berg- & hüttenm. Ver., Zts., April,1912; p. 141; 2500 w*; 45c.

———. *Advance in Air Compression; A New Style of Valve.*—Queensland Govt. Mng. Jnl., April,1912; p. 156; 1000 w*; 35c.

———. *Air Compressors; Types and Details of Construction.*—Practl. Engr., April 1,1912; p. 342; 5000 w*; 20c.

———. *Central Compressing Plant at Butte.*—E. & M. J., Feb.17,1912; p. 356; 1000 w*; 25c.

———. *Knocking in Air Compressors.*—Compr. Air Mag., Jan.,1912; p. 6305; 600 w*; 25c.

———. *Looking after the Air Compressor;* [Setting the Meyer riding cut-off valve gear].—Practl. Engr., June15,1912; p. 626; 600 w; 25c.

———. *Loss of Head in the Flow of Air.*—Canadian Engr., Feb.8,1912; p. 278; 1600 w*; 25c.

———. *Measuring Air Flows; Ferreira Deep Master-Meter.*—S. Afr. Mng. Jnl., Jan.27,1912; p. 755; 1000 w; 35c.

———. *Placing Air Pipes in Shafts.*—E. & M. J., Apr.20,1912; p. 786; 500 w; 25c.

———. *Neuzeitige Bauformen von Luftkompressoren;* [Some new forms of stationary and mobile air-compressors for various purposes].—Kohle & Erz, May6, 1912; p. 487; 5000 w*; 35c.

———. *Reheating Air for Drills.*—E. & M. J., Feb.17,1912; p. 350; 1000 w*; 25c.

———. *Sargent Gas-Engine-Driven Air Compressor.*—Practl. Engr., Apr.15,1912; p. 409; 1000 w*; 20c.

———. *Steam-Driven Compound Air-Compressor;* [Westinghouse design, London].—Engnrg., May31,1912; p. 732; 1000 w*; 35c.

———. *Test of Mixed-Pressure Turbo-Compressor.*—Electrician, May31,1912; p. 321; 500 w; 35c.

———. *The Best Air-Compressor Lubrication.*—Mining & Engg. World, May25, 1912; p. 1103; 500 w; 10c.

———. *Ueber die Wahl eines Luftkompressors;* [The choice of an air compressor].— S. W. Deu. Industrie Ztg., Feb.20, 1912, p. 91; 1500 w; 35c.

FANS AND BLOWER

See also "Blast and Draft" under Thermic Metallurgy, Chapter 11; also Ventilation, Chapter 8.

Rateau, A.—*Turbogebläse der Hochöfen von Biscaya;* [Turbo-blowers at the Biscaya blast furnaces; from Oestr. Ingr. & Archt. Ver., Zts., Oct.6,1911; abstract].—Montanist. Rundschau, Feb.1,1912; p. 120; 500 w; 45c.

von Stein.—*Elementare Berechnung der Turbo-Gebläse und Kompressoren;* [Elementary construction, notes, and computations for turbo-blowers and compressors].—Dingler's Polyt. Jnl., Apr.20,1912; 4 pp; May4, pp. —; 75c.

Wunderlich, H.—*Ein Beitrag zur Berechnung von Turbokompressoren;* [The construction and computation of turbo-blowers and compressors].—Fördertechnik, May, 1912; pp. 100-103*; 65c.

———. *Turbo-Compressors and Blowers in Practical Service.*—Iron Age, April4, 1912; p. 842; 2500 w*; 25c.

HAULAGE AND HOISTING

Bütow and Dobbelstein, —. *Vergleichende Untersuchungen an Grubenlokomotiven;* [Comparative tests of various types of compressed-air mine locomotives; Schwartzkopff, Borsig, Meyer, Ruhrthaler types].—Glückauf, March23,1912; pp. 461-468*; March30, pp. 501-511*; $1.

Guérin, —. *Locomotives à air comprimé, système Meyer;* [Use of Meyer compressed-air locomotive at Levant de Flénu colliery, Belgium].—Annales d. Mines (Belgiq.), Vol. 17, No. 2; 1912; p. 413; 2500 w*; 95c.

Hodges, C. B.—*Air, Electric and Mule Haulage.*—Coal Age, Feb.3,1912; p. 541; 2500 w*; 20c.

Nordberg, B. V.—*Mine Hoisting Systems Compared;* [Steam vs. air vs. electricity].—E. & M. J., May18,1912; p. 993; May25, p. 1035; 9000 w; 40c.

Paehr, —. *Experiences with Mine Locomotives, Dortmund* (in German).—See under Haulage, in Chapter 9.

Pauly, K. A.—*Electric Motors versus Compressed-Air Engines for Driving Deep-Mine Hoists.*—Amer. Inst. Mng. Engrs., Bull. 60, Dec.,1911, pp. 923-951*; $1.15.
Abstract in Engg. & Contractg., Jan.3, 1912; p. 7; 4000 w*; 25c.

Stapenhorst, —. *A Compressor Plant for Mine Haulage;* [Translated from "Glückauf"].—Coal Age, Jan.13,1912; p. 438; 1000 w*; 20c.

Taite, Chas. D.—*Lancashire Electric Power Co.'s System and Its Application to Lancashire Collieries;* [Includes discussion of electricity vs. compressed air for haulage; read to Manchester Geol. & Mng. Soc.].—Iron & Coal Trades Rev., March15,1912; p. 410; March22, p. 455; 6000 w*; 50c. Also in Coll'y Guardn., March22,1912; p. 579; 6000 w*; 30c.

Thunblom, A.—*Tryckluftlokomotiv för malmtransport;* [Compressed air mine locomotive at the Grängesberg iron mines].—Jernkontor. Annaler, Nov.15,1911; pp. 917-920*; 45c.

———. 1000 *HP. Crude-Oil Compressed Air Locomotive.*—Mng. & Engg. Rev., March,1912; p. 271; 500 w; 35c.

———. *Air-Driven Side Dump Car.*—E. & M. J., May11,1912; p. 932; 500 w*; 25c.

———. *Exhaust Steam Compressing Air to 100 Atmospheres;* [for haulage at Bergbau colliery, Neu-Essen].—Compr. Air Mag., March,1912; p. 6352; 1200 w*; 25c.

———. *Locomotive à air comprimé Schwartzkopf;* [The Schwartzkopf compressed-air locomotive].—Rev. Noire, Jan.7, 1912, p. 12; 500 w*; 35c.

In Italian in Ingr. Ferroviaria, Jan.31, 1912; p. 24; 500 w*; 35c.

PUMPING; DRILLING; AND MISCELLANEOUS MINE AND MILL APPLICATIONS

Abrams, H. T.—*Pumping by Compressed Air.*—Columbia School of Mines, Quar'ly; April,1912; p. 293-312*; 65c.
Abstract in Met. & Chemi. Engg., May, p. 316; 4000 w*; 35c. Also in Canadian Engr., June13, p. 779; 5000 w*; 25c.

Allen, A. W.—*Air Lifting of Slime Pulp.*—Mng. Mag., April,1912; p. 284; 1800 w*; 45c.

Copperthwaite, W. C.—*Tunnel Shields and the Use of Compressed Air in Subaqueous Work.*—London, 1912 (2d edition); pp. —; 260 figs; $9 (book).

Creen, J.—*Comparative Effect of Air Vessels on Deep-Well Pumps.*—Practl. Engr., Jan.15,1912; p. 78; 1500 w*; 25c. Abstract in Mechl World, May31, p. 256; 1200 w*; 35c.

Davis, G. J. and C. R. Weidner.—*An Investigation of the Air Lift Pump.*—Univ. of Wisconsin, Bull. No. 450; Oct.,1911; 167 pp.*; 50c.
Abstract in Engg. & Contractg., Feb.14, 1912; 3000 w*; 20c. Also in Wisconsin Engr., Feb., p. 234; 500 w; 35c. Also in Canadian Engr., April4, p. 481; 4000 w*; 25c. Also in Engg. Mag., May, p. 260; 1500 w*; 35c.

Essich, Otto.—*Theorie und Berechnung der Turbogebläse und Turbokompressoren;* [Theory and computations of turbo-blowers and turbo-compressors].—Techn. Hochschule Carolo-Wilhelmina Braunschweig, Dissert., 1911; pp. —; $1 (Thesis).

Gilbert, G. H.; L. I. Wightman, and W. L. Saunders.—*The Subways and Tunnels of New York; Methods and Costs.*—New York; 1912; 372 pp*; $4 (book).

Hanff, —. *Entwässerung von Grubenfeldern durch Pressluftpumpen;* [Mine drainage by compressed-air pumps and drill holes].—Braunkohle, March29,1912; p. 821-824*; 50c.

Hill, L.—*Caisson Sickness and the Physiology of Work in Compressed Air.*—London, 1912; pp. —; $3.50; (book).

Iltis, P.—*Die Pressluftwerkzeuge;* [Compressed-Air Tools].—Leipzig, 1911; pp. —; 105 figs.; $1.00; (book).

Kröning, E. E.—*Pressluftwerkzeuge im Grubenbetriebe;* [Compressed-air tools used in mining; drills and coal picks].—Kali Erz u. Kohle, Dec.5,1911, p. 1219; 1800 w*; 35c.

Liwehr, E.—*Ist die Stangenabbauschrämmaschine geeignet die Radschrämmaschine zu verdrängen, und welches sind die hiebei in Frage kommenden Wertigkeitverhältnisse zwischen elektromotorischem Antrieb und dem Betriebe mittels komprimierter Luft;* [Punching vs. rotary coal cutters and electricity vs. compressed-air drive].—Oestr. Ingr. & Archt. Ver., Zts., Feb.16, 1912; p. 108; 1000 w; 35c.

Liwehr, Eug.—*Pressluft und Elektrizität im Grubenbetrieb;* [Compressed air vs. electricity in mines].—Montanist. Rundschau, May16,1912; p. 449; 2500 w*; 35c.

Liwehr, E.—*Verwendung von Pressluft im Bergbaubetriebe;* [Applications of compressed air in mining; I: Drifting and stoping; II: Drilling and drills].—Zts. f. Kompr. Gase, Dec.,1911, pp. 41-45*; Jan., 1912; pp. 67-72*; Feb., pp. 81-86; $1.50.

Meuskens, C.—*Neuere Systeme selbsttät-*

iger Vorschubeeinrichtungen für Druckluftbohrhämmer; [New devices for automatic forward thrust in compressed-air drills].—Kali, March15,1912; p. —; Apr.1, p. 162; 5500 w*; 65c.

Miller, F. S.—*Commercial Value of the Air Lift.*—Compr. Air Mag., June,1912; p. 6460; 2200 w; 25c.

Pütz, O. — *Die Handbohrmaschinen;* [Hand Rock-Drills].—Kattowitz, 1911; 63 pp.; 49 figs.; $1; (book).

Richards, F.—*The Air Lift; Principles Involved, Applications, Pipe Proportions, Pressures and Air Required.*—Practl. Engr., Apr.1,1912; p. 352; 2500 w; 20c. Reprint in Compr. Air Mag., May, p. 6413; 2500 w*; 25c. Also in Mining & Engg. World, June15, p. 1253; 10c. Also in Mex. Mng. Jnl., July, p. 21; 2500 w; 25c.

Richards, F.—*Compressed Air in the Machine Shop.*—Ideal Power, Dec.,1911, p. 229; 1200 w; 20c.

Richardson, F.—*Raising Water by Compressed Air; Compressed-Air Pumping Systems.*—Power, May14, p. 684; May21, p. 726; 3800 w*; 20c.

Shaw, W. B.—*Coal Cutting Machinery;* [Review of various types, and merits of electricity vs. compressed air; read to Manchester Asso. of Engrs.; abstract].—Iron & Coal Trades Rev., Dec.1,1911, p. 879; 7000 w*; 35c.

Also in Mechl. World, Dec.1, p. 258; Dec. 15, p. 279; Jan.5,1912; p. 8; Jan.26, p. 39; Feb. 2, p. 52; 7000 w*; 80c. Also in Sci. & Art of Mng., Dec.9, p. 198; 2000 w; 35c. Also in Electrician, Dec.22, p. 420; 400 w; 35c. Also in S. Afr. Engg., Dec., p. 109; 4500 w*; 35c. Also in Mng. Engg., Jan., 1912, p. 280; Feb., p. 307; 7000 w*; 50c. Also in Coll'y Guardn., March8, p. 479; March15, p. 527; March22, p. 584; 7000 w*; 80c.

Summers, L. E.—*Suggestions for Pneumatic Tool Users.*—Ideal Power, Apr.,1912; p. 5; 750 w; 20c.

Wortmann, K.—*Untersuchungsstelle für Pressluftmaschinen;* [Testing laboratory for compressed-air tools at the Consolidation colliery, Gelsenkirchen].—Glückauf, Dec.9,1911, p. 1919; 1000 w; 45c.

———. *Ball Bearings vs. Roller Bearings in Portable Air Drills.*—Ideal Power, June,1912; p. 66; 1500 w; 20c.

———. *Compressed-Air Grouting Machine for Grouting Tunnel Lining;* [Wallkill tunnel, Catskill aqueduct].—Engg. & Contractg., March6,1912; p. 265; 500 w*; 20c.

———. *Comparative Test of Air Drills;* [Air consumption].—Coal Age, Apr.5,1912; p. 842; 500 w*; 20c. Also in Compr. Air Mag., June, p. 6454; 500 w*; 25c.

———. *Driving the Big Savage Railroad Tunnel with Compressed Air* [near Cumberland, Md.].—Engg. Record, Dec.23, 1911, p. 728; 2500 w*; 25c. Reprint in Compr. Air Mag., Feb., p. 6324*; 20c.

———. *Fahrbare Grubenkriessäge mit Druckluftantrieb;* [Portable rotary saw for mines, with compressed-air drive].—Glückauf, March16,1912; p. 442; 250 w; 45c.

———. *Goodman Compressed-Air Breast Machine with Balanced Engine.*—Electr. Mng., April,1912; p. 43; 750 w*; 20c.

———. *L'emploi du marteau pneumatique dans les mines de fer;* [Pneumatic hammer drills in iron mines of Meurthe-et-Moselle, France].—Soc. Amicale d.... Mineurs de Douai, Nov.25,1911, p. 751; 1000 w; 35c.

Steam

FURNACES; FUELS; COMBUSTION

See also under "Coals"; also under "Petroleum"; also under "Thermic Metallurgy."

Bleininger, A. V.—*Surface Combustion.*—Brick, Jan.1,1912; p. 31; 1200 w*; 20c.

Böndel, —. *Teer-Koksgrus Unterwindfeuerung;* [Down-draft firing of coke breeze and coal tar at the Schwartzkopff machine shops at Lauban].—Jnl. f. Gasbeleuchtg., March9,1912; p. 241-242*; 50c.

Bone, Wm. A.—*Surface Combustion;* [Read to Franklin Inst., Oct.30,1911].—Frankl. Inst., Jnl., Feb.,1912; p. 101-132*; 65c. Abstract in Engg. Rev., March15, p. 367; 10,000 w*; 35c.

Bone, Wm. A.—*The Flameless Incandescent Surface Combustion of Gases;* [Read to Amer. Gas Inst., St. Louis, 1911; abstract].—Iron Age, Dec.7,1912; p. 1248; 4000 w*; 30c. Also in E. & M. J., Jan.20, 1912; p. 177; 4500 w*; 25c. Also in Mng. Mag., Jan.,1912; p. 68; 600 w; 45c.

Bone, Wm.—*Surface Combustion;* [Special lecture before Cavendish Society, Leeds University; abstract].—Engnrg., May10, 1912; p. 632; 3000 w*; 35c.

Breckenridge, L. P., H. Kreisinger and W. T. Ray.—*Steaming Tests of Coals and Related Investigations,* 1904-1908.—U. S. Bureau of Mines, Bull. No. 23, 1912; 380 pp*; 10c.

Clark, S. M.—*The Fuel Cost in Making Steam;* [Guides in the selection of coal and fuel economy].—Practl. Engr., May15,1912; p. 507; 1800 w; 25c.

Hart-Davis, H. V.—*A Dust-Fuel Boiler and Its Uses;* [Read to Manchester Geol. & Mng. Soc.; abstract].—Coll'y Guardn., Feb.16,1912; p. 326; 3000 w*; 30c. Also in Iron & Coal Trades Rev., Feb.23, p. 298; 3500 w*; 30c.

Hempel, —. *Selbsttätige Zugregulierung für Feuerungsanlagen;* [Automatic draft regulation for firing plants].—Stein- & Braunkohle, May15,1912; p. 121; 500 w*; 35c.

Hempel.—*Vorschläge zur Verbesserung der Treppenrostfeuerungen;* [Suggested improvements in the step-grate firing system].—Stein & Braunkohle, May1,1912; p. 105; 1500 w*; 35c.

Hermanns, H.—*Ueber künstlichen Zug bei Dampfkesselanlagen;* [Artificial draft in boiler plants]:—Glaser's Annalen d. Gewerbe., May15,1912; pp. 194-197*; 50c.

Hermanns, H.—*Die mechanische Bekohlung von Kesselhäusern;* [The mechanical coaling of boiler houses].—Ton-industrie Ztg., Dec.5,1911, p. 1709; 2000 w; 35c.

Jacka, J. S.—*Standard Boiler House and Coal-Handling System of the Crystal Falls Iron Mining Co.*—Lake Superior Mng. Inst., Proc., 1911; p. 82-87*. Abstract in Mines & Minerals, Nov.,1911, p. 255; 2000 w*; 35c.

Jzart, S.—*Versuch einer ökonomischen Kesselheizung mit der drehbaren Feuerung System Savary mit Kohlengrus und Staub;* [Economy test of boiler-firing using slack and coal dust with the rotary Savary grate].—Kohle & Erz, March25,1912; p. 293; 500 w*; 35c.

Klein, R.—*Neuerungen im Dampfkessel- und Feuerungsbau;* [Innovations in boiler and furnace construction: reprint from Schweizer Bau Ztg., Vol. 58, 1911].—Berne, 1912; 15 pp*; 44 figs.; $1; (pamphlet).

Leese, J. S.—*Firing Soft Coal Screen-*

ings; [Use in large cotton mill].—Mechl. World, Apr.5,1912; p. 160; 1200 w*; 35c.

Lent, L. B.—*Significance of Draft in Boilers.*—Power, June4,1912; p. 798; 2200 w*; 15c.

Maguire, T. F. J.—*The Fuel Economizer.*—Engg. Mag., June,1912; pp. 389-398*; 35c.

Maguire, T. F. J.—*Relative Economy of Various Types of Draft Equipment; Forced Mechanical Draft.*—Engg. Mag., May,1912; pp. 198-205; 5000 w*; 35c.

Mayer, J. E.—*Feuerungsanlagen und Dampfkessel;* [Firing installations and boilers].—Leipzig, 1911; 75c (book).

Mills, S. J. A.—*Economics in Coal for Steam Production.*—Mechl. World, May10, 1912; p. 219; May 17, p. 232; 2500 w*; 35c.

Mowat, J. F.—*Burning Screenings;* [Economy tests with balanced draft].—Power, May7,1912; p. 656; 1000 w; 15c.

Pratt, H. K.—*Boiler Draught.*—London, 1911, pp. —; $1.50 (book).

Ray, W. T. and H. Kreisingér.—*The Significance of Draft in Steam Boiler Practice.*—U. S. Bur. of Mines, Bull. 21; 1911; 62 pp.*; 10c.

Thimm, —. *Die Beseitigung der Kesselasche in Braunkohlenwerken durch den Mammutbagger;* [Handling boiler ashes in lignite plants by means of power shovels].—Braunkahle, May3,1912; pp. 65-67*; 50c.

———. *Application of Prof. Bone's Boiler;* [Describes surface-combustion boiler of Skinningrove Co.].—Power, Jan.16,1912; p. 80; 1200 w*; 15c.

———. *Prevention of Smoke by Combustion;* [Addition of fireclay tubes in the furnace to retain the heat for burning distilled gases].—Mines & Minerals, May,1912; p. 583; 1800 w*; 35c.

———. *Surface Combustion;* [Lucke patents of 1900 vs. Bone process].—Jnl. of Ind'l & Engg. Chem'y, Feb.,1912; p. 77; 2000 w*; 65c.

BOILERS AND FEED

Alexander, J.—*The Fitzgibbon Boiler.*—Amer. Inst. Cheml. Engrs., Trans., Vol. III, pp. 308-311.

Bonner, A. H.—*The Causes of Boiler Deterioration and their Remedy;* [Read to Midland Counties Instn. of Engrs.].—Coll'y Guardn., March8,1912; p. 480; 2500 w; 30c. Also in Iron & Coal Trades Rev., March8, p. Mag., Jan.,1912; p. 68; 600 w; 45c. Also in Engg. News, Jan.18, p. 96; 2500 w*; 25c.

Boswell, S.—*A Needless Defect in the Modern Lancashire Boiler;* [Read to Manchester Asso. of Engrs.].—Mechl. World, March29,1912; p. 152; Apr.5, p. 159; 3500 w*; 50c.

Braungard, K.—*Ueber Wasserreinigung und Kesselsteinbekämpfung;* [Water purification and fighting boiler-scale].—Chemiker Ztg., May9,1912; p. 521; 2700 w; 35c.

Buchan, Wm.—*Dangers Peculiar to Boiler Mountings, etc.;* [from British Home Office report].—Mechl. World, Dec.15,1911, p. 280; Dec.22, p. —; 4000 w*; 35c.

Busse, C. F.—*Pyrometers and Boiler Efficiency.*—Power, May21,1912; p. 728; 2000 w*; 15c.

Bütow, —. *Verdampfungsversuch an einem mit Wefer-Gasfeuerungen ausgerüsteten Zweiflammrohrkessel;* [Steaming tests of a Wefer gas-fired biflame tubular boiler].—Glückauf, May18,1912; p. 777-781*; 50c.

Casmey, W. H.—*Steam Production; A Comparison Between the Yorkshire and Lancashire Boiler;* [Read to Brighouse Engg. Soc.].—Indian & Eastn. Engr., April, 1912; p. 146; May, p. —; 4000 w; 75c.

Claussen, E.—*Entstehung und Verhütung des Kesselsteins;* [Origin and prevention of boiler scale].—Hagen, Westphalia; 1912; 35 pp.; 75c; (book).

Collins, H. E.—*Purchasing the Boiler.*—Practl. Engr., Apr.15,1912; p. 402; May1, p. —; 3000 w; 20c.

Cullen, Wm.—*The "Luminator" Purification Treatment of Water for Steam Boilers.*—Cheml. Met. & Mng. Soc. of S. Afr., Jnl., March,1912; p. 366-268; April, p. 407-8; May, p. 463; 5000 w*; $2.45.

Abstract in Mng. Sci., June6, p. 487; 1500 w; 20c. Also in S. Afr. Mng. Jnl., June29, p. 671; 1800 w; 35c.

Dobbelstein, O.—*Versuche mit Kesselspeisswassermessern;* [Tests of boiler feed-water gauges].—Glückauf, Jan.27,1912, p. 140-142*; 50c.

Durley, R. J.—*Coals of Canada,* by J. B. Porter and others; *Part 7, Boiler Tests;* Canada Dept. Mines, Mines Branch Report No. 83; 1912; Vol. 2; pp. 3-120*; $1.25.

Ennis, W. D.—*James Watt in Cornwall in* 1781.—Power, Feb.13,1912; p. 212; 1200 w*; 15c.

Farwell, —. *Comparison of Commercial Economy of Gas Engines and Steam Turbines.*—Electr. World, Feb.3,1912; pp. 246-248*; 50c.

Gow, A. M. and J. E. Howard.—*Tests of Old Boilers.*—Engg. News, Feb.1,1912; p. 201; 6000 w*; 25c.

Grundy, Jas.—*The Babcock & Wilcox Water-Tube Boiler.*—Sci. & Art of Mng., March2,1912; p. 352; 1000 w*; 35c.

Gutermuth, —. *Einige Leitsätze für die Wahl einer zweckentsprechenden Wasserreinigung;* [Basic principles in the selection of a suitable system of water purification].—Kohle & Erz, March25,1912; p. 298; 3500 w*; 30c. Also in Sci. & Art of Mng., March30, p. 385; 600 w; 35c.

Hempel, —. *Neues über Kesselstein;* [Newer developments in the boiler-scale question].—Kohle & Erz., Apr.29,1912; p. 417; 1200 w; 35c.

Knesche, J. A.—*Measurement of Hot Feed Water.*—Power, Jan.23,1912; p. 102; 4000 w*; 15c.

Leese, J. S.—*Notes on Cleaning Babcock & Wilcox Boilers.*—El. Rev. (London), March29,1912; p. 526; 2000 w*; 35c.

Libert, J. and Al. Delmer.—*Les congrès des associations pour la surveillance des appareils à vapeur de Bruxelles,* 1910; [The international congress of boiler and steam engine inspection; resumé of papers of interest on the safety question].—Annales d. Mines (Belgiq.), Vol. 17, No. 2; 1912; p. 525-540; 95c.

Menzin, A. L.—*Drilling Boilers in the California Oil Fields.*—Jnl. of El'y Power & Gas, Jan.20,1912; p. 51; 1000 w*; 35c.

Meier, Col. E. D.—*Modern Boiler Problems.*—Sibley Jnl., June,1912; p. 380; 5000 w; 35c.

Nelson, A.—*Prevention of Explosions;* [Steps when water is below gauge level, with pressure up, and brisk fire burning].—Sci. & Art of Mng., May11,1912; p. 475; 1000 w; 35c.

Nelson, A.—*Purifying Hard Water for Mine Boilers.*—Sci. & Art of Mng., March2, 1912; p. 353; 1000 w; 35c.

Preussischen Dampfkessel Ueberwachungs Vereine.—*Tätigkeit der Vereine,* 1910-1911; [Summary of report of Prussian Biiler Inspection Asso. for 1910-1911].—Glückauf, March16,1912; p. 442; 1500 w; table; 50c. Also in Stein- & Braunkohle, Apr.1, p. 83; 1700 w; 35c.

Rowland, R. H.—*Economy in the Use of Steam;* [Treatment of bad water; requirements of good boilers; feedwater preheating].—Mines & Minerals, March, 1912; p. 470; 1800 w; 35c.

Spalckhaver, R. and Fr. Schneiders.—*Die Dampfkessel nebst ihren Zubehörteilen und Hilfseinrichtungen;* [The steam boiler and its accessories and auxiliaries].—Berlin, 1911; 426 pp.; 679 figs.; $7.50; (book).

Uehling, Edw. A.—*Notes on Steam Boiler Efficiency;* [Read to Master Mechanics' Asso. of Amer., Boston, 1912; abstract].—Power, May28,1912; p. 761; 2700 w; 15c.

Vance, V. C.—*Calculating the Size of Feed Pumps.*—Power, May21,1912; p. 730; 1800 w*; 15c.

Viola, B.—*Condensers and Condensation for Vacuum Plants.*—Met. & Chemi. Engg., June,1912; p. 366; 2200 w*; 35c.

Weddell, Alb.—*The Softening of Water Containing Magnesia Salts, for Industrial Use.*—Chemi. Engg., Jan.,1912; p. 379; 1000 w*; 45c.

Wadleight, F. R.—*Colliery Boiler Room Practice.*—Coal Age, May25,1912; p. 1070; 4500 w*; 20c.

Wickware, F. G.—*European Power Plant Practice; New Water-Softening Process;* [Permutite].—Pract'l Engr., June1,1912; p. 571; 1500 w*; 25c.

White, B.—*British Practice in Superheating.*—Power, Jan.30,1912; p. 138; 3500 w*; 15c.

Amer. Boiler Mfrs. Asso.—*Uniform Boiler Specifications.*—Power, April2,1912; p. 488; 3000 w; 15c. Also in Practl. Engr., Apr. 15, p. 398; 4500 w; 20c.

———. *Automatic Boiler-Feed Regulators.*—Iron & Coal Trades Rev., March29, 1912; p. 497; 1200 w*; 35c.

———. *Automatic Boiler Feed Control;* [Crosby system].—Iron & Coal Trades Rev., Feb.9,1912; p. 207; 1500 w*; 30c.

———. *Automatic Water-Purifying System.*—Coal Age, Jan.20,1912; p. 486; 500 w; 20c.

———. *Lea Water-Flow Recorder.*—E. & M. J., June1,1912; p. 1089; 600 w*; 25c.

———. *Locomotive Boilers at Collieries.*—Coll'y Guardn., Apr.12,1912; p. 731; 3500 w*; 35c.

———. *Strain Measurements of Steam Boilers.*—Canadian Engr., Feb.1,1912; p. 229; 1800 w*; 25c.

———. *The Purification and Softening of Water by Permutite.*—Jnl. of Ind'l & Engg. Chem'y, Apr.,1912; p. 240; 3000 w; 65c.

———. *Versuche und Verbesserungen beim Bergwerksbetriebe* 1911; [Innovations and improvements in mining practice in Prussia in 1911; steam boilers and furnaces].—Zts. f. d. Berg-, H-, & Salinenw., Vol. 60, No. 1; 1912; pp. 134-140*; $1.50.

———. *Water Purification for Collieries.*—Coal Age, Apr.20,1912; p. 900; 2100 w*; 20c.

———. *Water-Softening Plant for 10,000 Gallons per Hour.*—Engnrg., May16,1912; p. 661; 2000 w*; 35c.

STEAM TURBINES

Baumann, K.—*Recent Developments in Steam Turbine Practice;* [Read to Instn. of Electr. Engrs., Manchester section; abstract].—Electrician, Feb.2,1912; p. 662; 4500 w*; 35c. Also in El. Rev. (London), Feb.23, p. 317; 5500 w*; 35c.

Blau, E.—*Die Verwendung von Turbomaschinen im modernen Bergwerksbetriebe;* [Applications of turbines in modern mining practice].—Deu. Bergwerks Ztg., Suppl. No. 6, Nov.28,1911; p. 1; No. 7, Dec.9, p. 1; 4500 w; 50c.

Christie, A. G.—*Present State of Steam Turbine Development;* [Read to Amer. Soc. of Mechl. Engrs.].—Iron Trade Rev., May 9,1912; p. 1000; May16, p. 1052; 10,000 w*; 30c.

Discussion before Amer. Soc. Mechl. Engrs., in "Power," Aug.13, p. 215; 5000 w*; 15c.

Extract on "Economy Tests of Steam Turbines"; in Power, June11,1912; p. 831-2; 2000 w; table; 15c.

Abstract of paper in Iron & Coal Trades Rev., July5,1912; p. 16; 6000 w*; 35c. Also in Power, July30, p. 145; 3200 w*; 15c.

Cunningham, J. C.—*Applications of Exhaust-Steam Turbines to the Power Plants of Mines;* [Read to Australasian Inst. of Mng. Engrs., June,1911; abstract].—Mines & Minerals, Jan.,1912; p. 370; 3600 w*; 35c. Also abstracted in Engg. Mag., March, 1912; p. 370; 1600 w*; 35c.

Dreyfus, Edw. D.—*New Developments in Steam Turbine Engineering.*—Westn. Soc. of Engrs., Jnl; May,1912; pp. 413-450*; 65c..

Dreyfuss, E. D.—*The Development of Steam Turbine Design;* [Read to Indiana Electric Light Asso.; abstract].—Power, Oct.3,1911; p. 536; 3500 w; 15c. Also in El. Rev. (Chicago), Oct.7, p. 732; 5000 w; 20c. Also in Engg. News, Oct.5,1911; p. 415; 3200 w; 20c. Also in Mechl. World, Jan26,1912; p. 40; 2500 w; 35c. Also in Ind'l Engg., April, p. 296; 2700 w; 30c.

Edwards, Geo. E.—*Use of Low Pressure Turbines in Mining Work.*—Mining & Engg. World, Jan.13,1912, p. 51; 3000 w*; 10c.

Gardam, J. R. W.—*The Steam Turbine;* [Read to W. Australian Instn. of Engrs; abstract].—W. A. Mng., etc., Jnl., March30, 1912; p. 18; Apr.6, p. 7; 4800 w; 50c.

Heym, W.—*Turbinenantrieb für Walzwerke;* [Turbine drive for rolling mills].—Kali Erz & Kohle, May25,1912; p. 519; 1500 w; 35c.

Kaiser, —. *Die neuere Entwickelung des Dampfturbinenbaues;* [Newer developments in steam turbine construction].—Bayer. Dampfk. Ver., Zts., Nov.30,1911, pp. —; Dec.15, pp. 227-229*; Dec.31, pp. 238-242*; $2.00.

Kennedy, R.—*Steam Turbines; Their Design and Construction.*—London, 1911; pp. —; $1.50; (book). Review in Engnrg., Feb.9, 1912; p. 171; 500 w; 30c.

London, W. J. A.—*Operation of Steam Turbine Plants; Importance of Proper Foundations.*—Pract'l Engr., June1,1912; p. 553; 1500 w*; 25c.

London, W. J. A.—*Status of the Small Steam Turbine;* [Read to Amer. Soc. Mech. Engrs.].—Power, Jan.2,1912; p. 8; 2700 w; 15c.

Lyford, O. S., and R. W. Stoval.—*Average Construction Costs of Steam Turbo-Electric Power Plants;* [Read to Engrs. Soc. of W. Penn.].—Engg. & Contractg., March6,1912; p. 280; 750 w; 20c.

Morrow, J.—*Steam Turbine Design, With*

Special Reference to the Reaction Type, Including Chapters on Condensers and Propeller Design.—London, 1911; pp. 471; 150 figs.; $4.50; (book).

Neilson, R. M.—*The Steam Turbine.*—New York, 1912 (5th edition); 651 pp.; 415 figs.; $5; (book).

Perkins, F.—*Eine neue Amerikanische Radialdampfturbine;* [New American radial steam turbine; Bonom's].—Zts. f. Turbinenw., Apr.10,1912; pp. 157-158*; 75c.

Schömburg, W.—*Die Dampfturbine in Elektrizitätswerken und auf Bergwerks und Hüttenbetrieben;* [Steam turbines in electric power plants and at mines and metallurgic works].—Berg- & Hüttenm. Rundschau, May 20, 1912; p. 175; 5000 w; plate; 35c.

Schulte, F.—*Untersuchung einer Abdampfturbinenanlage von 1000KW. auf der Zeche Neu Iserlohn II der Harpener Bergbau A-G., Dortmund;* [Tests of an exhaust-steam 1000-kw. turbine plant at the Neu Iserlohn Colliery No. 2 of the Harpener Co., Dortmund].—Ver. Deu. Ingr., Zts.; March30,1912; p. 514-519*; 75c.

Schulte, F.—*Erfahrungen beim Betriebe von Dampfturbinen;* [Experiences with steam turbines].—Glückauf, Apr.13,1912; p. 602; 1000 w; 50c.

Sibley, R.—*The First Principles of the Steam Turbine.*—Jnl. of El'y Power & Gas, Feb.17,1912; p. 135; Feb.24, p. —; 4500 w*; 70c.

Tupper, C. A.—*Power System Cleveland Cliffs Iron Co.;* [Hydro-electric and steam turbine].—Power, Jan.9,1912; p. 40; 1200 w*; 20c. Also in E. & M. J., Feb.3, p. 274; 1200 w*; 25c.

Tupper, C. A.—*Operating on Coke-Oven-Gas versus Steam Turbine* [at government collieries, Saarbrücken district, Germany].—Mining & Engg. World, Dec.23,1911, p. 1255; 4000 w*; 10c.

———. *A New Steam Turbine;* [New De Laval multi-cellular type].—Iron Age, May30,1912; p. 1342-d; 3500 w*; 30c. Also described in Power, June4, p. 793; 1500 w*; 15c.

———. *Radial-Flow Steam Turbines.*—Engnrg., May3,1912; p. 583; 2500 w*; 35c.

———. *Rateau-Smoot Mixed-Flow Turbine.*—Iron Age, June13,1912; p. 1463; 1000 w*; 30c.

———. *The Economy Steam Turbine;* [New Kerr type].—Iron Age, June6,1912; p. 1406; 1500 w*; 30c.

———. *The Kienast Steam Turbine.*—Power, Apr.9,1912; p. 503; 1500 w; 15c.

———. *The Ljungström Steam Turbine.*—Engnrg., Apr.12,1912; p. 482; Apr.19, p. 513; 7000 w*; 50c.

———. *The Sturtevant Steam Turbine.*—Power, Feb.20,1912; p. 250; 2800 w*; 15c. Also in Iron Age, Feb.22, p. 466; 1000 w*; 30c.

———. *The Tosi Steam Turbines.*—Engnrg., Apr.26,1912; p. 555; 4500 w*; 35c.

ENGINES; ACCESSORIES

For exhaust steam see also under "Turbines."

Berger, P.—*Fortschritte im Bau der Gleichstrom Dampfmaschine;* [Progress in construction of the unidirectional steam engine].—Kohle & Erz, Apr.22,1912; p. 390; 1200 w; 35c.

Bullock, S.—*Ejector Condensers;* [Read to Asso. of Mng. Electr. Engrs., E. of Scotland branch].—Iron & Coal Trades Rev., Apr.26,1912; p. 642; 4800 w*; 35c.

Carpenter, R. C.—*Investigation of the Economy of a Simple Engine Operating with Steam Less than that of Atmospheric Pressure.*—Sibley Jnl., April,1912; p. 292-311*; 65c. Abstract in Engg. News, June 6, p. 1077; 2500 w*; 25c.

Coulston, P. B.—*Should Exhaust Steam be Wasted?;* [Abstract; read to Manchester Geol. & Mng. Soc.].—Iron & Coal Trades Rev., Dec.15,1911, p. 964; 1500 w; 30c. Also in Sci. & Art of Mng., Dec.23,1911, p. 224; 600 w; 35c. Also in Coll'y Guardn., Dec. 22, p. 1250; 2000 w; 30c.

Davis, F. H.—*Notes on Exhaust Steam Accumulators.*—Power, Apr.23,1912; p. 575; 2200 w*; 15c.

Doederlein, Dr.—*Kerchove and Uniflow Steam Engines;* [Translated from Ver. Deu. Ingr., Zts.].—Power, Apr.16,1912; p. 539; 2500 w*; 15c.

Fischer, W. F.—*Condensers for the Power Plant.*—Power, March19,1912; p. 392; 2500 w; 15c.

Fothergill, H.—*High-Vacuum, Reciprocating Engines.*—Power, Jan.16,1912; p. 72; 2000 w*; 15c.

Frey, F.—*Die Zylinder ortsfester Dampfmaschinen;* [The cylinder of stationary steam engines].—Berlin, 1911; 44 pp.; 109 figs.; $1; (book).

Gebhardt, G. F.—*Various Types of Steam Meters.*—Power, Feb.6,1912; p. 176; Feb.13, p. 215; 5000 w*; 20c.

Hottinger, —. *Einige Dampfkraftanlagen mit Abwärmeverwertung;* [Some steam power plants with utilization of exhaust steam].—Ver. Deu. Ingr., Zts.; Jan.6,1912; p. 11-17*; Jan.13, pp. 51-58*; Jan.20, pp. 92-101*; Jan.27, pp. 127-133*; Feb.3, pp. 179-184*; $3.

Hubbard, C. L.—*The Value of Exhaust Steam for Isolated Power Plants.*—Practl. Engr., Feb.1,1912; p. 122; 1500 w; 25c.

Van Langendonck, C.—*Poppet-Valve Steam Engine;* [of Belgian Walschaerts Engine Works].—Practl. Engr., June15, 1912; p. 608; 1000 w*; 25c.

Lawrence, H. H.—*Colliery Steam Piping Suggestions.*—Coal Age, Jan.20,1912; p. 507; 1200 w*; 20c.

Merklin, —. *Ueber die Wirtschaftlichkeit der Zentralkondensationsanlage;* [Economic efficiency of the central condensing plant].—Stein & Braunkohle, Jan.15,1912; p. 15; 1200 w; 35c.

Morely, T. B.—*Properties of Air and Steam Mixtures in Relation to Condensing Plant.*—Engg., Jan.19,1912; p. 76; 1500 w*; 30c.

Rich, T.—*The Condensation of Steam; Modern Apparatus and Methods.*—Cassier's Mag., Jan.,1912; p. 9-32; 7000 w*; 35c.

Schröder, —. *Pufferversuche mit Pirani- und Lancashire-Maschinen;* [Exhaust tests with Pirani and Lancashire boilers and engines].—E. T. Z., Dec.21,1911; p. 1289-1291*; 75c.

Swingle, C. F.—*Steam Engine Governors.*—Pract'l Engr., Jan.1,1912; p. 16; 3300 w*; 25c.

Wansborough, W. D.—*The Portable Steam Engine, Its Construction and Management.*—London.1912; pp. 180*; $1.75 (book).

Wilkinson, Geo. and J. R.—*Methods of Dealing with Losses in Steam Plant Due to Condensation;* [Read to Asso. of Engrs.-in-Charge; abstract].—Electrician, Dec.29, 1911; p. 484; 4000 w; 35c.

———. *American Type of Uniflow Steam Engine;* [Nordberg].—Power, June11,1912; p. 830; 1000 w*; 15c.

HOISTING AND MISCELLANEOUS APPLICATIONS IN MINING AND METALLURGY

Freyberg, M.—*Die Gleichstromdampfmaschine und ihre Gestaltung als Fördermaschine;* [The unidirectional steam engine and its application to mine hoists].—Kali, Apr.15,1912; p. 188; 5000 w*; 45c.

Gentebrück, —. *Die Fahrtregler der Dampffördermaschinen mit besonderer Berücksichtigung des Systems Schönfeld;* [Controlling systems for steam mine hoists with special reference to the Schönfeld system].—Techn. Blätter, March16,1912; p. 81; 2500 w*; 35c.

Heys, W.—*Steam Expansion Gear Suitable for Winding Engines.*—Sci. & Art of Mng., March16,1912; p. 382; 600 w*; 35c.

Moldenhauer, E.—*Wirtschaftliche Schachtförderung aus grossen Teufen;* [The problem of economic hoisting from great depths, and comparison of steam vs. electricity].—Glückauf, Dec.16,1911, p. 1948-1961; Dec.23, pp. 1981-1992*; 75c.

Abstract of a dissertation, Essen, 1911; 38 pp.; 37 figs.; $1.

Morison, D. B.—*Steam Regenerative Accumulators;* [Special reference to British mine hoists; read to Instn. of Engrs. & Shipbuilders in Scotland].—Iron & Coal Trades Rev., March22,1912; p. 443; 5000 w*; 30c. Also in Coll'y Guardn., March29, p. 629; 5000 w*; 35c.

Nordberg, B. V.—*Mine Hoisting Systems Compared;* [Steam vs. air vs. electricity].—E. & M. J., May18,1912; p. 993; May25, p. 1035; 9000 w; 40c.

Schönfeld, —. *Selbsttätige Geschwindigkeitsregelung an Dampffördermaschinen;* [Automatic speed regulator and control for steam hoisting engines].—Glückauf, Feb. 24,1912, p. 300; 2000 w*; 45c.

Wickware, F. G.—*A Volumetric Steam Accumulator;* [Harle-Balcke system, at Carl shaft, Cologne].—Practl. Engr., Jan.,1912; p. 27; 750 w*; 25c.

Wintermeyer. — *Sicherheitsvorrichtungen (Fahrtregler) für Dampffördermaschinen mit mechanischer Regelung;* [Safety devices (controllers) for steam hoists].—Kohle & Erz, May6,1912; p. 434; 5000 w*; 35c. Also in Dingler's Polyt. Jnl., May25, p. 325-7; June8, p. —*; 75c.

Dampfkessel Ueberwachungs Ver., Essen. —*Abnahmeversuch an einer Dampffördermaschine;* [Tests of a steam hoisting engine at the Westerholt colliery, Westphalia].—Glückauf, Feb.17,1912, p. 269; 1000 w*; 45c.

Verein Deutscher Ingenieure.—*Untersuchungan elektrisch und mit Dampf betriebener Fördermaschinen;* [Tests of electric vs. steam driven hoists for power consumption].—See under Electricity.

GENERAL; MISCELLANEOUS

Draper, C. H.—*Heat and the Principles of Thermodynamics.*—London, 1911 (revised edition); 444 pp*; $1.75 (book).

Finch, A. H.—*Auxiliary Plant for Power Stations;* [Read to N. E. Coast Instn. of Engrs. & Shipbuilders; abstract].—Iron & Coal Trades Rev., May3,1912; p. 689; 9000 w*; 35c.

Hempel, —. *Die Ermittelung der Leistungsfähigkeit von Dampfanlagen;* [Determining the efficiency of steam plants].—Kohle & Erz, March18,1912; p. 273; 1200 w*; 35c.

Jackson, H. D.—*Electric Power Plants for Mines.*—Coal Age, June1,1912; p. 1102; 2800 w*; 20c.

Knoblauch, O., and H. Molliter.—*Die spezifische Wärme cp. des überhitzten Wasserdampfes für Drucke von 2-8 kg/qcm. und Temperaturen von 250-350°C.;* [The specific heats cp. of superheated steam at pressures of 218 kgms. per sq. cm. and temperatures of 250-350°C.].—Berlin, 1911; pp. —; 50c; (pamphlet).

Langer, —. *Gas- oder Dampfbetrieb auf Hüttenwerken;* [Gas versus steam power in smelting works, foundries, etc.].—Stahl & Eisen, Dec.21,1911, pp. 2088-2094; 75c.

Leprince-Ringuet, F.—*Rapport de Mission en Angleterre et en Allemagne sur la Distribution de l'Energie dans les Régions Houillères;* [Report of the French commission to England and Germany on the Distribution of Power in Collieries].—Annales d. Mines (Paris), Oct.,1911; 112 pp.*; $1.50.

Mathot, R. E.—*Comparison of Gas, Oil and Steam Motive Powers;* [Installation and operating costs].—Power, March5,1912; p. 328; 1600 w; 20c.

Wolff, Th.—*Die Entwickelung der Dampfmaschine und der Eisenbahnen durch den Bergbau;* [Influence of mining on the development of the steam engine and railroading].—Kohle & Erz, Feb.19, p. 170; Feb.26, p. 194; March4, p. 218; March11, p. 241; 18,000 w*; 75c.

———. *Eine Umkehrwalze für Bleiblechfabrikation:* [Transforming a steam to electric drive in rolling mill].—Dingler's Polyt. Jnl., May4,1912; pp. 285-286*; 50c.

———. *Steam Engines, Steam Turbines and Internal-Combustion Engines for Generating Electricity, VIII.*—Mechl. World, Jan.5,1912; p. 7; 1600 w*; 35c.

Hydraulic Power

For hydro-electric power see Electricity.

See also under Sluicing and Hydraulicking in "Dredges; Sluicing; Excavators," in Chapter 8.

Bougault, P.—*La législation des chutes d'eau;* [Laws governing use of water power in France].—Grenoble, 1911; 350 pp.; $2.50 (book).

Coldwell, O. B.—*Selection of a Water-Wheel Unit.*—Amer. Inst. Electr. Engrs., Proc., April.1912; pp. 363-382*; $1.15. Abstract in Canadian Engr., May9, p. 633; May16, p. 660; 4800 w*; 35c.

Henry, G. J.—*Elements of Hydraulic Engineering; The Development of the Tangential Wheel.*—Jnl. of El'y Power & Gas, May 25,1912; p. 492; 3500 w*; 35c.

Henry, Geo. J.—*The Development of the Turbine.*—Jnl. of El'y Power & Gas, March 2,1911, p. 191; 3000 w*; 25c.

Hill, S. B.—*The Hydraulic Ram; Its Possibilities of Development and Use;* [Read to Pacific NW. Soc. of Engrs., Nov.,1911]. —Engg. & Contractg., Jan.3,1912; p. 16; 4000 w*; 25c. Also in Canadian Engr., May23, p. 703; 5500 w*; 25c.

Hoff, H.—*Das Hydrodynamische Getriebe von Föttinger;* [The Föttinger hydraulic turbine].—Stahl & Eisen, Jan.11,1912; p. 41-47*; 75c.

Holloway, T. W.—*Calculating the Flow of Water in Pipes.*—Power, June4,1912; p. 790; 2500 w*; 15c.

Horner, J.—*Hydraulic Power; I: General Utilities; II: Particular Applications.* —Cassier's Magazine, May,1912; pp. 431-441*; (2) June, pp. 490-513*; 65c.

Kaplan.—*Die Berechnung der Flüssigkeitsreibung in Saugrohren, Düsen, und Zellen von Turbinen und Pumpen;* [Estimating friction losses in respiratory pipes, chambers and cells of turbines and pumps, and effect on efficiency].—Zts. f. Turbinenwesen, Feb.,1912; pp. —; March, pp. 136-138; $1.

Kegel, —. *Bergmännische Wasserwirtschaft;* [Hydraulic science and the mining industry].—Halle,1912; 211 pp.; 105 figs; $3.50 (book).

Merriman, M.—*Treatise on Hydraulics.*—London, 1912 (9th edit.); pp. 565; 224 figs.; $5; (book).

Pfarr, A.—*Die Turbinen für Wasserkraftbetriebe;* [Turbines in Water-Power Practice].—Berlin, 1911 (2d edition); 2 vols.; 871 pp.; 548 text figs.; atlas of 62 plates; $12 (books).

Roland, C. V.—*Steel Pipe.*—Sibley Jnl., June,1912; p. 403; 1000 w; 35c.

Sauder, P. M.—*Stream Measurements;* [Methods in western Canada].—Canadian Engr., May30,1912; p. 715; 7000 w*; 25c.

Smith, H. K.—*Water Power Development in the U. S.;* [Report of Commissioner of Corporations to President Taft].—Washington (Dept. Commerce & Labor), 1912; pp. —; (book).

Springe, —. *Die Ausnutzung der Kraft von Flut und Ebbe;* [Utilization of flood and ebb tide power].—E. T. Z., Feb.15, 1912; pp. 157-159*; 35c.

Stewart, R. T.—*Strength of Steel Tubes, Pipes and Cylinders Under Internal Fluid Pressure.*—Amer. Soc. Mech. Engrs., Jnl; May,1912; pp. —; $1.
Abstract in Ind'l Engg., May,1912; p. 362; 2100 w; 30c. Also in Engg. Record, May25,1912; p. 585; 2200 w; 25c.

Werner.—*Die Wasserwirtschaft von St. Andreasberg im Harz;* [Hydraulic power in the St. Andreasberg mining and smelting district, Hartz Mtns., Prussia].—Zts. f. d. Berg-, H-, & Salinenw., Vol. 60, No. 1; 1912; pp. 56-74*; $1.50.

Worrell, M. L.—*Laying Water Mains under Streams.*—Municipal Jnl., July11, p. 41; 1500 w*; 30c.

U. S. Geol. Survey, Hydrographic Division.—*Water Powers of North Carolina.*—N. Car. Geol., etc., Survey, Bull. 20,1911; 383 pp*; $1.

———. *German Development of the Hydraulic Ram;* [Tide power at Hull-an-Oste, Stade].—Jnl. of El'y Power & Gas, Apr.13,1912; p. 333; 500 w; 35c.

———. *Pelton Wheel with Adjustable Buckets.*—Engnrg., Jan.5,1912; p. 13; 300 w*; 35c.

———. *Some Recent Böving Water-Turbine Plants.*—El. Rev. (London), Apr.5, 1912; p. 547; 2500 w*; 35c.

———. *The Hydropulsator, an Improved Form of Hydraulic Ram;* [Abstract of D. C. Schulz's paper before Ver. Deu. Ingr.].—Engg. Record, Jan.13,1912; p. 50; 800 w*; 20c.

———. *The Life and Economic Use of Steel Water-Pipe;* [Results at Everett and S. Bellingham, Wash.].—Engg. & Contractg., Apr.17,1912; p. 444; 500 w; 20c.

———. *Turbokesselspeisepumpe;* [Turbine boiler-feed pumps; description and tests].—Zts. f. Danpfkessel Betr., Dec.29, 1911; p. 539-542*; 75c.

CHAPTER XIII.—MISCELLANEOUS TECHNOLOGY.

(Comprising Wastes Disposition; Transportation, Storage and Handling; Geology; Law; Financial; Historical; Educational, Filing and Indexing.)

Waste Disposition: Slags, Tailings, Fines, Fumes, Sludge, Waters, etc.

FUMES; FLUE-DUST; FURNACE-GAS; SLAG

See also under "Thermic Metallurgy"; also under "Combustion Engines"; see also Slag Fertilizers and Slag Cements, Chapter 7.

Abels, C.—*Eine neue Brechanlage für Hochofenschlacke;* [Slag-crushing plant and practice at the Burbach iron works, Prussia].—Stahl & Eisen, Apr.11,1912; p. 615; 1600 w*; 75c.

Avery, C. M.—*The New Granby Slag-Disposal Plant.*—"The Labor Saver," April, 1912; 2¼ pp*. Abstract in E. & M. J., May 11, p. 935; 1000 w*; 25c.

Cottrell, F. G.—*Mineral Losses in Gases and Fumes.*—Jnl. of Ind'l & Engg. Chem'y, March,1912; p. 182; 3000 w*; 65c. Abstract in M. & S. P., March30, p. 467; 2500 w; 20c.

Cottrell, F. G.—*Flue Dust Precipitation by Electrostatic Means;* [at Balaklala copper smelter, Cal.].—Amer. Inst. Mng. Engrs., Trans.; read Feb.,1912; pp. —*; $1.15.
Abstract in Met. & Chemi. Engg., March, p. 172; 1600 w*; 35c.

Eddy, L. H.—*Thiogen Process Demonstration;* [Treating McDougal-roaster gases for sulphur at Penn smelter, Campo Seco, Cal.].—E. & M. J., May4,1912; p. 873; 1500 w*; 25c.
Italian abstract in Rassegna Mineraria, May21, p. 286; 500 w; 35c.

Fleissner, H. — *Eisenhochofenschlacken, ihre Eigenschaften und ihre Verwendung;* [Blast-furnace slags, their properties and uses].—Halle, 1911; pp. —*; (book).
Extracts on slag-cement industry.—Stahl & Eisen, Feb.8,1912; pp. 224-231; 5000 w*; 75c. Extract on slag composition in Oestr. Zts. f. Berg-, & H-wesen, Jan.20, p. 29; Jan.27, p. 46; 8000 w*; 65c.

Friedrich, K.—*Studie über die Verdichtung des Hüttenrauches;* [Studies on the various processes of smelter-fume condensation].—Inst. f. Metallographie, etc., an Freiberg; Mittlngn. f. 1910; pp. 76-95*; $3.20.

Friedrich, A.—*Die Schwefelsäure-Produktion der oberschlesischen Zinkindustrie;* [Sulphuric acid production in the zinc smelters of Upper Silesia].—Techn. Blätter, Feb. 17, 1912; p. 52; 2000 w; 35c. Reprinted in Zentralbl. f. Kunstdünger-Ind., March7, p. 73; March21, p. —; 50c.

Gouvy, —. *Utilization des gaz de hauts forneaux;* [Utilization of blast-furnace waste gases; discussion before Nord & Pas-de-Calais Mining Congress, 1911].—Soc. de l'Ind. Minrl. St. Etienne, C-R., Oct.,1911; p. 580; 2400 w; 75c.

Guillemain, C.—*Theorie und Praxis der Staubverdichtung und der Reinigung und Entstaubung von Gasen;* [Theory and practice of dust concentration and the purification and dust-freeing of gases].—Halle, 1911; 54 pp.; $1; (book).

Guttmann, A.—*Fünfzig Jahre gekörnte Hochofenschlacke;* [Blast furnace slags, their composition and review of 50 years' developments in their utilization as cement].—Ton Industrie Ztg., May4,1912; p. 752; 1500 w; 35c.

Hammond, E. K.—*The Utilization of Blast Furnace Gases;* [at American plants, especially Gary, Ind.; from the "Armour Engineer"].—Chemi. Engr., March,1912; p. 117; 4000 w*; 35c.

Hasenclever, Max.—*Manufacture of Sulphuric Acid;* [Progress with pyrite, blende, galena and copper; Hunter Memorial lecture, Liverpool Univ., Oct.,1911; abstract].—E. & M. J., Jan.20,1912; p. 175; 3000 w; 25c.

Hughes, L. S.—*A Method for the Utilization of Lead Furnace Fume;* [Chrome from open-hearth fumes].—Jnl. of Ind'l & Engg. Chem'y, April,1912; p. 262; 1800 w; 65c. Abstract in Mining & Engg. World, Apr. 27, p. 901; 1800 w; 10c.

Johannsen, O.—*Ueber Staubbestimmung in Gichtgas;* [Estimation of dust in flue gases; report of chemical committee of Ver. Deu. Eisenhüttenleute].—Stahl & Eisen, Jan.4,1912; p. 16; 2500 w; 75c.

von Kéler, H.—*Die wichtigsten Fortschritte auf dem Gebiete der anorganischen Gross-industrie im Jahre* 1911; [The more important advances in the chemical industries in 1911; (1) Sulphuric acid technology].—Zts. f. angew. Chemie, March8, 1912; p. 454; 5000 w*; 50c.

Kühl, Hans.—*Die Fabrikation des Portlandzementes aus Hochofenschlacke;* [*Manufacture of Portland cement from blast-furnace slag*].—Chemiker Ztg., Dec.14,1911, p. 1386; 1100 w; 30c.

Lang, H.—*Metallurgy;* [Vol. I, includes chapters on smoke and sulfur fumes of metallurgic works].—N. Y. and London; 1911; 255 pp.; $3.00 (book).

Martin, Al. H.—*Progress of Smelter Smoke Control in California;* [Baghouse system at Mammoth Copper Co. plant at Kennett].—Mng. Sci., Apr.4,1912; p. 306; 2400 w*; 20c. Also described by Martin in Mines & Methods, April; p. 437; 2100 w*; 20c.

Nelson, W. A.—*Sulphuric Acid Manufacture in Tennessee;* [at Ducktown copper smelters].—Mng. Sci., Feb.8,1912; p. 149; 2000 w*; 20c. Reprinted in Mines & Methods, Feb.,1912; p. 407*; 25c.

Peter, —. *Die Verwertung der heissen Abgase von Flammöfen zur Dampferzeugung;* [Utilizing the hot gases given off by reverberatory furnaces, for raising steam].—Stahl & Eisen, May16,1912; pp. 811-816; May23, p. —; $1.

Pfoser, A.—*Utilizing the Waste Heat of the Open-Hearth Furnace for Steam Raising;* [From Stahl & Eisen].—Iron & Coal Trades Rev., March29,1912; p. 490; 750 w; 35c. Also in Canadian Engr., Apr.18, p. 558; 750 w; 25c.

Phalen, W. C.—*Sulphur, Pyrits and Sulphuric Acid in* 1911; [Production in U. S., with "Notes on the Manufacture of Sulphuric Acid from Smelter Fumes at Ducktown, Tenn.," by F. B. Laney; pp. 24-30].—U. S. Geol. Survey, Mineral Resources f. 1911; 1912; 30 pp; 20c.

Wilson, F. L.—*Experiments with the Thiogen Process;* [Sulphur recovery from smelter and roasting fumes].—M. & S. P., Apr,6,1912; p. 497; 1800 w*; 20c.

———. *Purification of Blast Furnace Gas;* [Halberg-Beth process at Dingler works, Zweibrücken].—Iron & Coal Trades Rev., Apr.12,1912; p. 570; May3, p. 684; 1000 w*; 50c.

———. *Reference List for Phosphates;* [Bibliography of world's phosphate industry, slag phosphates, etc.].—U. S., 62d Congress, 2d Session; Senate Doc. No. 190; 1912; pp. 78-106.

———. *Smelter Fume in Japan.*—M. & S. P., March9,1912; p. 364; 1500 w; 20c.

———. *The Balance Sheet in Smelting;* [Reviews limited demand for sulphuric acid by-product of copper smelters].—M. & S. P., March30,1912; p. 461; 1200 w; 20c.

———. *Use of Coke-Oven and Blast-Furnace Gases in Westphalia.*—Iron & Coal Trades Rev., March22,1912; p. 458; 500 w; 30c.

———. *Utilization of Slag Heat;* [Experimental plant on Vautin patent].—Iron & Coal Trades Rev., Apr.19,1912; p. 607; 1000 w*; 35c.

MINE AND MILL WATERS

See also Drainage, Chapter 8.

Copenharve, Chas.—*Copper Precipitation at Butte, Mont., a Paying Industry;* [From mine waters].—Mining & Engg. World, March30,1912; p. 720; 1200 w; 10c.

Dudley, C. B.—*Coal Mine Waste and Water Pollution;* [Effects in Lackawanna river, Penn.].—Water, Vol. 14, No. 159; pp. 60-62; 75c.

Kegel, —. *Bergmännische Wasserwirtschaft;* [Hydraulic science and the mining industry].—Halle, 1912; 211 pp.; 105 figs; $3.50 (book).

Knauer, H.—*Abwasservereinigung;* [Purification of Waste Waters].—Strelitz, Mecklenburg; 1911; pp. —; $1.25 (book).

Lehmann, M.—*Untersuchungen über den Kalk- und Magnesiagehalt im Magdeburger Leitungswasser;* [Effect of potash works on the lime and magnesia content of the water-supply of Magdeburg, Elb river].—Kali, Jan.1,1912; p. 3; 1200 w; 45c.

Lehmann, M.—*Untersuchungen über den Chlorgehalt des Magdeburger Leitungswassers und des Elbwassers vom linken und rechten Ufer;* [Tests of the chloride content of the Magdeburg water supply along both banks of the Elb river in the German potash district].—Chemiker Ztg., March2, 1912; p. 241; 1000 w; 25c.

Mahringer, A.—*Die Abwasser der Edelmetallwarenfabriken und die Bestimmung des enthaltenen Edelmetalls;* [Waste waters of precious-metal factories, and the determination of precious metals therein].—Elektrochem. Zts., Feb.,1912, p. 301; March, p. 337; 6000 w; $1.

Mehner, H.—*Die Entwässerung und Verfestigung der Kali Endlauge;* [Dewatering and solidification of potash wastes, with reference to possible utilization in mine packing].—Kali, Feb.1,1912; p. 49-54*; 4000 w; 45c.

Milbauer, J.—*Ueber die Verarbeitung der bei der Fabrikation von Konversionssalpeter sich ergbenden Mutterlaugen;* [Extraction of iodine from potash liquors and waste liquors in Austria].—Chemiker Ztg., March26,1912; p. 331; 2500 w; 35c.

Richards, J. W.—*Treatment of Mine Waters from the Ashio Copper Mine.*—See under Copper.

Roberts, T. P.—*Acids in the Monongahela River;* [Drainage of Pittsburgh coal mines and mills; read to Engrs. Soc. of W. Penn.].—Engg. Record, Dec.23,1911, p. 729; 1500 w; 25c.

Ziekursch, —. *Die Entwickelung der staatlichen Wasserversorgungsanlage im oberschlesischen Industriebezirk;* [Development of the municipal water supply plants in the Upper Silesian mining and industrial region].—Oberschles. Berg- u. H. Ver., Zts., Dec.,1911; p. 521-542*; 45c.

———. *Graf Posadowsky über die Schädigung der Flusslaufe durch Kalilaugen;* [Pollution of streams by wastes from potash works; discusses speech of Count Posadowsky in German Reichstag, March 20].—Kali Erz & Kohle, Apr.15, 1912; p. 377; 1500 w; 35c.

———. *Perjudicios occasionados por los derrames de las plantas de cianuracion;* [Methods of waste-cyanide disposition at various leading cyaniding works in Mexico].—Mex. Inst. of Mng. & Met'gy, Vol. II, No. 4, 1911, p. 105; No. 5, p. 154; 10,000 w; [in both English and Spanish]; $1.

Extracts in Mng. Sci., Oct.5,1911, p. 321; 2800 w; 20c. Also in Metgl. & Chemi Engg., Nov.,1911, p. 538; 2500 w; 35c.

TAILING; SLUDGE

Martin, Al. H.—*Converting Tailings to Commercial Products;* [Natomas dredge debris used for building stone in California].—Mines & Methods, May,1912; p. 473; 3000 w*; 20c.

Martin, Al. H.—*Dredging Previously Worked Deposits;* [Oroville field, Cal.].—Mng. & Engg. World, Dec.9,1911, p. 1174; 1200 w*; 10c. Reprint in Los Angeles Mng. Rev., Jan.6,1912, p. 10; 20c.

Möhrle, Th.—*Neues in der Schlammaufbereitung;* [Newer developments in the handling, pressing and treatment of coal slimes and their utilization].—Kohle & Erz, Jan.15,1912, p. 52; Jan.22, p. —; 2000 w*; 50c.

Paquet, F.—*Le Nouveau terril central du charbonnage de Sacré Madame;* [Tunnels for conveying refuse to central dump pile at the Sacré Madame colliery].—Asso. d. Ingrs. Mons., Publ.; Vol. 5, No. 3, 1911; p. 258*; $1.

Rice, C. T.—*Joplin, Mo., Car for Boulders.*—E. & M. J., Apr.6,1912; p. 690; 300 w*; 25c.

Ruhoff, O. E.—*Magnetic Separation of Zinc-Iron Ores as Found in Southwestern Wisconsin;* [With recovery and sale of iron pyrite].—Met. & Chemi. Engg., May,1912; p. 278; 3200 w*; 35c.

———. *Methods of Restoring Soil on Dredged Areas and Costs of Gold Dredging in Australia.*—Engg. & Contractg., March 13,1912; p. 287; 1200 w; 20c.

———. *Stacking Boulders;* [Providence mine, Joplin, Mo.].—E. & M. J., May4,1912; p. 882; 500 w*; 25c.

———. *The Bradley Process;* [Chlorination extraction of gold, silver and copper from waste coppel slimes at Washoe concentrator, Montana].—Mng. Jnl., Apr.6, 1912; p. 326; 1200 w; 35c.

———. *The Slime Problem;* [for copper, lead and zinc].—E. & M. J., Apr.27,1912; p. 821; 750 w; 25c.

———. *The Treatment of Tailings:* [Stanley Classifier tests on the Rand].—S. Afr. Mng. Jnl., Dec.16,1911; p. 526; 1400 w; 35c.

———. *The Treatment of Tailing Dumps on the Rand.*—Mining & Engg. World, Apr. 6,1912; p. 772; 1400 w; 10c.

USE OF WASTE AND LOW-GRADE FUELS

See also under "Coals"; also under "Gas-Producers"; also under "Combustion Engines."

See also previous sub-heading, "Fumes, Furnace-Gas," etc., for gas-engines.

Ackley, C. S.—*Electric Power from Anthracite Waste;* [Lehigh and Harwood plants in Pennsylvania].—E. & M. J., Dec. 23,1911, p. 1213; 400 w; 25c.

Bacon, C. J.—*Some Methods of Coke Dust Disposal.*—Progressive Age, May1, 1912; 7 pp*; 25c.

Böndel, —. *Teer-Koksgrus Unterwindfeuerung;* [Down-draft firing of coke breeze and coal tar at the Schwartzkopff machine shops at Lauban].—Jnl. f. Gasbeleuchtg., March9,1912; p. 241-242*; 50c.

Bütow and Dobbelstein. — *Ausnutzung minderwertiger Brennstoffe auf Zechen des Oberbergamtsbezirks Dortmund, XIII;* [Utilization of refuse coal and low-grade fuels in Dortmund collieries, Part 13; Tests of gas-producers, II].—Glückauf, Jan.6, 1912, pp. 1-15*; 50c.

Griffiths, J. L.—*Smoke Abatement and Fuel Economy;* [International convention, London, 1912; discusses exhibits and Ramsay's plan for burning coal in the mine].—U. S. Consul. Rep., May15,1912; p. 609; 3500 w; 20c.

Gwosdz. —. *Neue Gaserzeuger für feinkörnige oder staubförmige Brennstoffe;* [New gas producers for fine or dust coals].—Elektrotechn. Anzgr., Feb.11,1912; pp. 143-145*; Feb.15, pp. 157-158*; 75c.

Jzart, S.—*Versuch einer ökonomische Kesselheizung mit der drehbaren Feuerung System Savary mit Kohlengrus und Staub;* [Economy test of boiler-firing using slack and coal dust with the rotary Savary grate].—Kohle & Erz, March25,1912; p. 293; 500 w*; 35c.

Leprince-Ringuet, F.—*Sur la production, la distribution et l'emploi d'électricité par les charbonnages;* [The production, distribution and uses of electricity by coal mines, chiefly in France, England and Germany].—Paris, 1912; 136 pp. 49 figs; $2.50 (book).

Mann, —.; and Wüstefeld.—*Vergasung minderwertiger Brennstoffe;* [Gasification of low-grade fuels; waste products of coal mines, coke and gas works].—Glückauf, May25,1912; p. 830-834; 50c.

Meuskens, Cl.—*Kontinuierlich arbeitende Generatoren zur Vergasung minderwertiger Brennstoffe;* [Continuous producers for gasification of low-grade and waste coals, coke breeze, etc.].—Techn. Blätter, May25, 1912; p. 162; 1800 w*; 35c.

Meyer, —. *"Pintsch" Gas-Producers;* [Using coke breeze and coking refuse, locomotive smoke-box cinders, etc.; from Jnl. f. Gasbeleuchtg.].—Iron & Coal Trades Rev., Apr.26,1912; p. 645; 1000 w*; 35c.

Mowat, J. F.—*Burning Screenings;* [Economy tests with balanced draft].—Power, May7,1912; p. 656; 1000 w; 15c.

Shutt, W. F.—*Utilization of Low-Grade Fuels;* [Using Texas crushed-bone coal in gas-producers].—Coal Age, May4,1912; p. 979; 750 w; 20c.

Simmersbach, O.—*Verwendung von Koksofengas im Martinofen;* [Use of coke-oven-gas fuel in the Martin basic furnace; read to Ver. Deu. Eisenhüttenleute].—Ver. Deu. Ingr., Zts., Nov.4,1911, p. 1857; 1200 w; 50c.

———. *Ueber die Verwendung roher, lignitischer Braunkohle zur Darstellung von Generator Gas;* [Use of woody lignites in gas producers, especially the Westerwald, Germany, lignites].—Stein- & Braunkohle, Apr.15,1912; p. 93; May1, p. 103; 3600 w; 50c.

BRIQUETTING

See also papers on solid oil under Petroleum.

Abeking, K.—*Die Verwendung von Guss- und Stahlbriketts in der Eisengiesserei;* [The use of briketted castings and steels in the iron foundry].—Eisen Ztg., Apr.27, 1912; p. 296; May4, p. 313; 2000 w; 35c.

Althouse, W. D.—[*New Binder-Briquetting System for Thin-Bedded Coals, at Phoenix, Md., and Elsewhere*].—Black Diamond, Apr.6,1912; p. 18, p. 21; 1200 w*; 30c.

Auzies, J. A. A.—*Sur le briquetage des minerais de fer;* [The briquetting of pyrite cinders as a source of iron ore].—Rev. de Mét'l'gie, Jan.,1912, p. 35; 1000 w; $1.15.

Beneke, Alb.—*Ein Ueberblick über die neueren Prikettierungsmethoden von Eisenerzen;* [Review of recent developments in iron-ore briquetting].—Erzbergbau, Jan.15, 1912; p. 20; 2000 w; 35c.

Fürth, H.—*Eisen- und Stahl Briketts im Giessereibetrieb;* [Use of iron and steel briquets in the foundry].—Giesserei Ztg., Feb.15,1912, p. 105; March1, p. 149; 4000 w*; 60c.

Gayley, Jas.—*The Sintering of Fine Iron-Bearing Materials;* [Dwight-Lloyd system on Cuban and other ores and flue dusts].—Amer. Inst. of Mng. Engrs., Bull. 56, Aug., 1911; p. 631; 3000 w*; $1.15.

Abstract in E. & M. J., July,15,1911; p. 115; 2000 w; 25c. Also in Iron Age, Aug. 24, p. 422; Jan.4,1912, p. 73; 4500 w*; 50c. Also in Iron Trade Rev., Aug.24,1911, p. 336; 3000 w*; 20c. Also in Iron & Coal Trades Rev., Sept.1,1911, p. 313; 3000 w; 30c. Also in Mines & Minerals, Apr.,1912; p. 559; 1900 w*; 35c.

Hansell, N. V.—*The Gröndal Briquetting Process.*—Amer. Inst. Mng. Engrs., Trans.; May,1912; pp. 557-575*; $1.15.

Abstract in Met. & Chemi. Engg., March, p. 166; 1600 w*; 35c. Also in Iron Trade Rev., March7, p. 544; 2200 w*; 20c. Also in Iron Age, March21, p. 710; 5000 w; 30c.

Heym, W.—*Antrazitstaub Briketts;* [Briquetting of anthracite dusts].—Kali Erz & Kohle, May15,1912; p. 483; 1600 w; 35c.

Holzhüter, E.—*Briquetage des minerais et poussières de hauts-forneaux par le procédé Weiss;* [Briquetting of ores and flue dusts by the Weiss process].—Rev. de Mét'l'gie, Jan.,1912; p. 44-49*; $1.15.

Jansen, —. *Elektrischer Antrieb von Brikettpressen mittels Drehstromkollektormotoren;* [Electric-drive for briquetting presses with alternate-current collector motors].—Braunkohle, Sept.1,1911, p. 338-344*; 50c.

Abstract in Montanist. Rundschau, Jan.1, 1912; p. 23; 500 w; 45c.

Klugh, J. G.—*Sintering of Fine Iron-Bearing Materials by the Dwight-Lloyd Process.*—Amer. Inst. Mng. Engrs., Trans.; May,1912; pp. 507-526*; $1.15.

Abstract in Met. & Chemi. Engg., March, 1912; p. 162; 2200 w*; 35c. Also in Iron Trade Rev., March7, p. 544; 2200 w*; 20c.

Landis, W. S.—*Agglomeration of Fine Materials;* [Summary of various processes].—Amer. Inst. Mng. Engrs., Trans.; read Feb.,1912; p. 164; 600 w; 35c.

Abstract in Met. & Cheml. Engg., March, 1912; p. 164; 600 w; 35c. Also in M. & S. P., March23, p. 439; 2500 w; 20c. Also in Mng. Sci., June6, p. 489; 2800 w; 20c. Also in Engg. Mag., July, p. 602; 1600 w; 35c.

Leyde, O.—*Mise en briquettes des tournures métalliques et leur valeur en fonderie de fer et de bronze;* [Briquetting of metal scrap in iron and brass foundries; various methods; from "Stahl & Eisen"].—Rev. de Mét'l'gie, Jan.,1912; p. 37-43*; $1.15.

Lovejoy, J. F.—*Advantages of Anthracite Briquettes as Fuel.*—Retail Coalman, Feb.,1912; p. 66; 2500 w; 35c.

Mehrtens, J.—*Brikettieranlagen zur Herstellung von Eisen- und Metallspänebriketts der Hochdruckbrikettierung G. m. b. H. in Berlin;* [Some German high-pressure briketting plants for iron and metal scrap, system of Hochdruckbrikettierungs Co., Ltd., Berlin].—Stahl & Eisen, Jan.25,1912; p. 135-143; 3500 w*; 75c.

Müller - Herring, —. *Die Entwicklung des Schulzschen Röhrentrockenapparates auf den Braunkohlenbrikettfabriken des niederrheinischen Braunkonlenbezirks;* [Development of the Schulz tubular drying system in the lignite briquetting works of the Lower Rhine district].—Braunkohle, March15,1912; p. 792-795; 50c.

Phillips, W. H.—*Manufacture of Patent Fuel and Utility of Low-Grade Coals;* [Discussion].—Mng. & Geol. Inst. of India, Trans.; Vol. VI, Part 4, Jan.,1912; pp. 187-195; $2.50.

Polster, —. *Neuere Enstaubungseinrichtungen auf rheinischen Braunkohlenbrikettfabriken;* [Dust-control devices in the lignite briquet works of the Rhine].—Braunkohle, Dec.22,1911, pp. 597-603*; Dec.29, p. 613-621*; Jan.12,1912; p. 645-648*; $1.50.

Pradel, —. *Maschinelle Feuerungen für Braunkohlenbriketts;* [Mechanical stokers specially adapted for lignite briquets].—Elektrotechn. Anzgr., Dec.7,1911; pp. 1263-1264*; 50c.

Pratt, W. E.—*On Briquetting Philippine Coals.*—Mineral Resources of Philipp. I'ds, 1911; p. 79; 1000 w; 65c.

Redmayne, R. A. S.—*Production of Coke and Briquettes in the U. K. in* 1910 [From Part III of Report on British Mines & Quarries].—Iron & Coal Trades Rev., Dec.15, 1911, p. 968; 500 w; table; 30c.

Reuss, —. *Die Beleuchtung der Braunkohlenbrikettfabriken;* [Illumination of lignite briquetting works].—Zts. f. d. Berg-, H-, & Salinenwesen, Vol. 59, No. 5, 1911; p. 714-725*; $1.15.

Richards, J. W.—*The Shumacher Briquetting Process.*—Amer. Inst. Mng. Engrs., Trans.; May.1912; pp. 545-556*; $1.15.
Abstract in Met. & Cheml. Engg., March, p. 165; 1000 w; 35c. Also in Iron Age, March7, p. 602; 1000 w*; 30c. Also in Iron Trade Rev., March7, p. 549; 1200 w*; 20c. Also in Canadian Engr., Apr.18, p. 556; 700 w; 25c.

Venator, —. *Versuche und Beobachtungen aus dem Gebiete der Brikettерzeugung;* [Some technical notes and experiments in the field of coal briquetting].—Jahrb. Berg- etc., Sachsen, 1911, pp. 90-112*; $3.00.

Vogel, F. A.—*Sintering and Briquetting of Flue Dust;* [Reviews various processes].—Amer. Inst. Mng. Engrs., Trans.; May, 1912; pp. 533-544*; $1.15.
Short abstract in Met. & Cheml. Engg., March,1912, p. 164; 1000 w; 35c. Also in Iron Age, March7, p. 588; 2000 w*; 20c. Also in Iron Trade Rev., March7, p. 551; 2000 w*; 20c. Also in Iron & Coal Trade Rev., March22, p. 457; 1000 w; 30c. Also in M. & S. P., April6, p. 503; 1800 w; 20c. Also in Cheml. Engr., June, p. 250; 1600 w; 35c. Also in Engg. Mag., Aug., p. 770; 1500 w; 35c.

Wright, C. L.—*Briquetting Tests at the U. S. Fuel Testing Plant, Norfolk, W. Va.*—U. S. Bureau of Mines, Bull. 30, 1911; 41 pp.*; 10c.

Dr. H.—*Zur Frage der Brikettierung des Gichtstaubes;* [The briquetting of flue dust].—Stahl & Eisen, Feb.15,1912; p. 265; 2500 w; 75c.

———. *Agglomerazione dei minerali e polveri d'alto forno;* [Briquetting of iron ore and flue dusts by the Weiss process, German Pat. No. 183,108; abstract from Stahl & Eisen, Vol. 31, 1911, pp. 1539-1543].—Rassegna Mineraria, Apr.1,1912; p. 190; 1000 w; 40c.

———. *An Electrically Operated Briquetting Plant;* [Grondal-Kjellin process on iron ores at Bede works, Hebburn-on-Tyne]. El. Rev. (London), March8,1912; p. 405; 1000 w*; 35c.

———. *Die Brikettfabrik in Dzieditz;* [The coal briquetting works at Dzieditz, Austria].—Montanist. Rundschau, March1, 1912; p. 224; 1500 w; 45c.

———. *Eine neue Brikettpresse;* [New Ehrhardt-Sehmer briquetting press].—Braunkohle, Feb.9,1912, p. 713-716*; 45c.

———. *Iron & Steel Briquets in Foundry Practice.*—Castings, Apr.,1912; p. 19; 1000 w; 25c.

———. *Le briquetage des poussières des hauts-fourneaux;* [The briquetting of dust and fines from blast furnaces].—Echo d. Mines, Dec.18,1911, p. 1305; 1000 w; 35c.

———. *Presse à agglomérer à moule fermé, système Debauche;* [Debauche briquetting press].—Rev. Noire, Jan.7,1912; p. 8; 1500 w*; 35c.

———. *The Leeds Briquette Works;* [Describes Yeadon binding process].—Iron & Coal Trades Rev., Jan.12,1912; p. 52; 500 w*; 30c.

———. *The Utilization of Fine Iron Ores and Residues;* [Gröndal briquetting system].—Iron & Coal Trades Rev., Jan. 19,1912; p. 92; 2000 w*; 30c.

———. *Ueber die technischen und wirtschaftlichen Gesichtspunkte, nach denen man Braunkohlen und Briketts für industrielle Feuerungen zu bewerten hat;* [Technical bases for valuation of lignite and briquets for industrial furnaces].—Oester. Ton-Industrie Ztg., 1911, No. 19; p. 315-316; 50c.

———. *Versuche und Verbesserungen beim Bergwerksbetriebe* 1911; [Innovations and improvements in mining practice in Prussia in 1911; coal briquetting].—Zts. f. d. Berg-, H-, & Salinenw., Vol. 60, No. 1; 1912; pp. 132-134*; $1.50.

GENERAL; MISCELLANEOUS

See also De-Tinning under "Tin"; also under "Petroleum." See also under "Coking; By-Products," etc.

Formenti, C.—*Residui Industriali; Utilizzazioni, Ricuperi;* [Industrial Wastes; Their Utilization and Recovery; pyrite cinders; soda wastes; gas-lighting; petroleum and oil shale; chlorine works by manganese method, iron and steel and lead and zinc mills, coal dust, etc].—Milan, 1911; pp. xx, 376; $1.25 (book).

Fowler, G. J.; E. Arden and W. T. Lockett.—*Influence of Waste Liquor from*

Sulphate of Ammonia Plants on Bacterial Purification of Sewage.—Soc. of Chem'l Ind'y, May31,1912; pp. 471-477; 65c.

Meachem, I.—*The Loss of Mineral Areas in South Staffordshire;* [Coal losses in pillars, supports, flooded workings, etc.; read to S. Staff. & Warwicks. Inst. of Mng. Engrs.].—Coll'y Guardn., Feb.23,1912; p. 377; 2000 w; 30c. Also in Iron & Coal Trades Rev., Feb.23, p. 289; 3000 w; 30c. Also in Sci. & Art of Mng., March2, p. 347; 1200 w; 35c.

Parsons, C. L.—*Miscellaneous Mineral Wastes;* [Wastes and possible economies in aluminum, arsenic, antimony, asbestos, barite, bismuth, bromine, chlorine, iodine, cadmium, enamels, fuller's earth, infusorial earth, lead, tin, nickel, petroleum, platinum, radium, rare earths, selenium, sulphur, zinc].—Jnl. of Ind'l & Engg. Chem'y, March,1912; p. 185; 5000 w; 65c.

Abstract in Mining & Engg. World, Feb. 24,1912; p. 447; 4000 w; 10c.

Ramên, A.—*Die neuesten Methoden zur Extraktion von Kiesabbränden und Kies;* [Newer developments in utilization of, and copper extraction from, pyrite and pyrite cinders; read to Polyteknisk Foren., Kristiania, Nov.29,1911; brief abstract in] Chemiker Ztg., Jan.9,1912, p. 33; 500 w; 35c.

Rosenfeld, J.—*Technische Versuche zur Verwertung der aus den Petroleumraffinierien stammenden Rückstände;* [Review of attempts at utilization of waste products and residues of oil refineries].—Monitr. du Pétrole Roumain, Nov.26,1911, pp. —; 75c. Allg. Oestr. Chemiker Ztg., Dec.1,1911, p. 178; 2100 w; 45c.

Werlitz, H.—*Ausnutzung der naturlichen Gase bei der Erdölgewinnung;* [Gas-engines and electric power generation from waste natural gas in the Campina and Moreni oil fields, Roumania; and on electric drilling].—Ver. Deu. Ingr., Zts., Oct.28,1911, p. 1807; 5000 w*; 50c.

American Chemical Society.—*Conservation and Mineral Wastes Symposium;* [Carbon Wastes, by J. A. Holmes; Zinc Losses, by W. H. Bassett; Special Alloys for Special Purposes, by W. H. Bassett; Potash and Phosphoric Acid, by F. K. Cameron; Nitrogen, J. D. Pennock; Silicate Industries, by A. V. Bleininger; Metallurgic Gases and Fumes, by F. C. Cottrell; Miscellaneous Metal and Mineral Wastes, by C. L. Parsons].—Jnl. of Ind'l & Engg. Chem'y, March, 1912; pp. 160-188; 65c.

———. *La fusion au four électrique des déchets de métaux;* [The smelting of scrap metal in the electric furnace].—Jnl. du Four Electriq., May15,1912; p. 223; 1000 w; 35c.

———. *Ueber ein neuen elektrischen Ofen zum Schmelzen von Gekrätze, Messing, Bronze, metallischen Abfällen, Silber und anderen Metallen, ausser Eisen und Legierungen;* [Electric tilting furnace for smelting mon-ferrius scrap metal].—Giesserei Ztg., Apr.1,1912; p. 223; 2000 w*; 35c.

Transportation: Storage; Handling

COAL STORAGE AND HANDLING

See under "Coals."

OILS, INFLAMMABELS; EXPLOSIVES

See also under "Petroleum"; also under "Explosives and Blasting"; also under "Hygiene, Safety, Rescue."

Bowie, C. P.—*Pumping California Petroleum;* [Describes pipe-line systems].—Oil Age, Sept.8,1911, p. 6; 1800 w*; 20c. Also in M. & S. P., Sept.2, p. 293; 1800 w*; 20c.

German abstract in Allg. Oesterr. Chemiker Ztg., Dec.15, p. 185; 1800 w*; 45c. Also in Bitumen, Feb.16, p. 54; 2000 w; 35c.

Boyce, Wm. A., and S. Fisher.—*Patent Cement Tank for Economical Oil Storage.*—Oil Age, May17,1912; p. 2; 1000 w*; 20c.

Flachs, Dr.—*Die Pipeline nach Constanza als wirtschaftlicher Faktor auf dem Europäischen Petroleummarkt;* [The pipe line from the Prahova oil field, Roumania, to the seaport of Constanza, and its bearing on the oil industry of Europe].—Allgm. Oestr. Chemiker Ztg., March15,1912; p. 41; April15, p. 57; 3000 w*; 45c.

Flachs, Dr.—*Ueber Benzinexplosionen; ihre Entstehung und Verhütung;* [Benzine explosions, their origin and prevention].—Allg. Oestr. Chemiker Ztg., Jan.15,1912; p. 9; 2000 w; 35c.

Hurter, Chas. S.—*Accidents in the Transportation, Storage and Use of Explosives.*—Lake Superior Mng. Inst., Proc., 1911; pp. 177-210. Abstract in Mining & Engg. World, Sept.30,1911, p. 627; 3100 w; 10c.

German abstract in Zts. f. Sprengstoffw., March1,1912, p. 93; 3200 w; 35c.

Ostrander, F. T.—*Transportation and Storage of Petroleum;* [History and present practice].—Oil Age, May30,1912; p. 2; p. 6; June6, pp. 2, 6, 10; 5000 w; 30c.

Steinem, C.—*A Wagon Oil Tank.*—E. & M. J., March9,1912; p. 489; 150 w*; 25c.

———. *Die Frage des Erdölprodukte-Transportes in Roumänien;* [Transportation problem for petroleum products in Roumania].—Allg. Oestr. Chemiker Ztg., Dec. 15,1911, p. 190; 750 w*; 45c.

———. *Die rumänische Pipe Lines;* (Pipe lines in the Roumanian oil fields; from Monitr. du Pétrole Roumain].—Organ d. Bohrtechniker, June1,1912; p. 131; 500 w; 35c.

———. *Oil Steamer for Gulf Trade;* [SS. "Gulfoil" of Gulf Refg. Co., its construction].—Manfrrs. Record, Feb.1,1912; p. 68; 1000 w; 25c.

———. *Pipe Line Facts;* [Development of pipe line transmission of oil in U. S.].—Oil & Gas Jnl., Feb.8,1912; p. 28; 4500 w; 20c.

———. *Reinforced Concrete Oil Loading Dock;* [1300 ft. dock of Gulf Refg. Co., at Port Arthur, Texas].—Engg. Record, June8,1912; p. 640; 1000 w*; 25c.

———. *Sicherheits Tankwagen;* [Büssing safety motor-truck tank wagon].—Petroleum, March20,1912; p. 667; 1200 w*; 45c.

DOCKS; SHIPS; SHIPPING

See also Cranes. For tank steamers see under Oils.

Bos, A. W.—*Les installations mécaniques du port d'Amsterdam;* [Mechanical handling and transport devices in Amsterdam harbor and port].—Rev. Univers. d. Mines, Oct.,1911; p. 46-55; $1.

Clark, W. A.—*Iron-Ore Docks on the Lakes;* [Statistical record of shipping docks on Lakes Superior and Michigan, with dimensions, capacities, etc.].—Iron Age, May16,1912; p. 1227; 500 w; table; 30c.

Cool, W.—*Les installations mécaniques du port de Rotterdam;* [Mechanical handling and transport devices in Rotterdam harbor and port].—Rev. Univers. d. Mines, Oct.,1911; p. 13-45*; $1.

Gradenwitz, Alfr.—*An Ore Wharf in Chile;* [for Michillas copper mines].—E. & M. J., May18,1912; p. 981; 250 w*; 25c.

Hetzel, F. V.—*A Combined Coal Dock Elevator and Crusher;* [at boiler plant of N. Y. Railways Co.].—Engg. News, May23, 1912; p. 975; 800 w*; 25c.

King, W. E.—*A Concrete and Steel Ore Dock Having New Features in its Design;* [Allouez Bay, Wis.].—Engg. Record, March 9,1912; p. 256; 2700 w*; 20c.

Mastbaum, H.—*Gefährdung eines Dampfertransports durch Schwefelkies;* [Danger of shipping pyrite by vessel; change of Huelva cargo to sulfate on dampening].—Chemiker Ztg., Jan.9,1912; p. 30; 1100 w; 30c.

Parsons, F. W.—*The Coal Unloading Terminal at Sewalls Point;* [Hampton Roads, Va.].—Coal Age, May25,1912; p. 1077; 1300 w*; 20c.

Petersen, A. G.—*Utlastningsanordningar för malm paa ön Elba;* [Iron-ore loading and transportation equipment on Elba island].—Jernkontor. Annaler, Bihang; Dec., 1911; pp. 979-988*; 45c.

Phenis, A.—*To Ship Ore to Philadelphia;* [Texas ores, and dock facilities at Port Bolivar].—Manfrrs. Record, Feb.8,1912; p. 49; 1000 w*; 25c.

Phillips, Wm. B.—*The New Iron-Ore Dock at Port Bolivar;* [Galveston Bay, Texas].—Iron Age, Apr.18,1912; p. 974; 1500 w*; 30c.

Rice, S.—*All-Water Transport of German Iron Ore;* [Discusses canal transportation, barges and unloading, especially at Henrichenburg].—Mining & Engg. World, May 11,1912; p. 995; 1800 w*; 10c.

Ross, Colin.—*Die Entstehung von Grosseisenindustrie an der Deutschen Seeküste;* [The possibilities of the transfer of the German iron and steel industry to the coast towns].—Berlin, 1911; 104 pp.; maps; $1.00; (book).

Ryerson, W. N. and J. B. Crane.—*Notes on the Use of Alternating Current in Unloading Coal;* [Describes piers and cranes at Duluth-Superior Harbor, Minnesota].—Amer. Inst. Electr. Engrs., Proc.; March, 1912; pp. 231-244*; $1.15.

Abstract and editorial discussion in Electrician, May3, p. 136; p. 144; 5000 w*; 35c. Also abstracted in Iron Age, May16, p. 1222; 750 w; 30c.

Schmeisser.—*Ueber Erzverladungen in Narvik;* [Iron ore loading at Narvik, Norway; from Oestr. Ingr. & Archt. Ver., Zts., No. 50, 1911; brief abstract].—Montanist. Rundschau, May16,1912; p. 458; 500 w; 35c.

Schumacher, H.—*Die westdeutsche Eisenindustrie und die Moselkanalisierung;* [The necessity of canalizing the Mosel river to develop the iron industry in the southwest Germany-Luxemburg and Rhine-Westphalian districts].—Leipzig, 1911; 162 pp*; $1.50 (book).

Tupper, C. A.—*Storage and Ship-Loading Plant, Vivero Iron Ore Co.;* [Long cableway loading piers, Lugo, Spain].—Mining & Engg. World, Feb.24,1912; p. 443; 1800 w*; 10c.

Williams, R. D.—*New Lower Lake-Port Car-Dumping Machines;* [At dock cranes at Cleveland and Lorain].—Iron Trade Rev., Jan.4,1912; p. 37; 1500 w*; 60c.

Williams, R. D.—*A Great Lakes 15,000-Ton Ore Carrier;* [Steamer Schoonmaker].—Iron Trade Rev., Jan.4,1912; p. 83; 2000 w*; 65c.

———. *A Modern Iron-Ore Dock and Unloading Plant;* [Penn. R. R. docks at Cleveland].—Iron Trade Rev., Apr.18,1912; p. 845; 3500 w*; 20c.

———. *Cargo-boat à vapeur pour le transport des minerais suédois, système Johnson-Welin;* [The Vollrath-Thamm, new iron-ore steamer for Sweden].—Génie Civil, Dec.30,1911, p. 168; 1000 w*; 50c.

———. *Coal Shipping Plant;* [Hancock anti-breaking chute and coal loading device for vessels].—Iron & Coal Trades Rev., Jan.5,1912; p. 8; 1000 w*; 30c.

———. *Comment on aménage un des plus grands ports miniers du monde;* [Shipping facilities at one of the world's largest ore ports—Huelva, Spain].—Echo d. Mines, Dec.4,1911, p. 1242; 1000 w; 35c.

———. *Concrete Ore Dock at Cleveland, Ohio.*—Engg. News, Feb.22,1912; p. 320; 4200 w*; 25c. Also in Engg. Record, Feb. 24, p. 212; 2100 w*; 25c.

———. *Description of the World's Largest Ore Dock;* [Allouez, Wis.; for Mesabi Range iron ores].—Iron Trade Rev., Jan. 18,1912; p. 191; 2500 w*; 20c.

———. *High-Speed Material-Handling Trolleys at the Texas City Terminals.*—Manfrrs. Record, March14,1912; p. 61; 750 w*; 25c.

———. *Iron Ore Railroads and Docks in Superior Region.*—E. & M. J., June15, 1912; p. 1188ffi 1200 w; 25c.

———. *Model Ore Handling Plant;;* [Electrical cranes and power plant for unloading iron-ore vessels at Philadelphia].—Salt Lake Mng. Rev., March30,1912; p. 15; 1500 w*; 25c. Also in Iron Trade Rev., Apr.4, p. 749; 1500 w*; 20c.

———. *New Ore Dock at Two Harbors, Lake Superior, Minn.*—Iron Trade Rev., Dec.28,1911, p. 1143; 2000 w*; 25c.

———. *New Type of Steel Barge for the Coal Trade.*—Coal & Coke Op., Dec.28, 1911, p. 427; 750 w*; 25c.

———. *Norfolk & Western R. R. Coal Handling Plant;* [Dock plans at Hampton Roads, Va.].—Iron Age, June13,1912; p. 1462; 750 w; 30c.

———. *Opening of Immingham Dock;* [Deep waterway dock of Gt. Central Ry. Co.].—Iron & Coal Trades Rev., May17, 1912; p. 798; 1200 w*; 35c.

———. *Ore Dock with Storage Capacity of 50,000 Tons;* [Presque Isle, Mich.].—Iron Trades Rev., Jan.4,1912; p. 23; 1000 w*; 60c.

———. *Replacing a Timber Ore Dock with a Concrete and Steel Structure* [at Two Harbors, Minn.].—Engg. Record, May 4,1912; p. 496; 1000 w*; 25c.

———. *Station d'embarquement des minerais de fer de la Ponupo Manganese Co. à Nima-Nima, Cuba;* [Cantilever-crane ship-loading equipment at Nima-Nima iron mines near Santiago, Cuba].—Génie Civil, Feb.10,1912; p. 293; 500 w*; 50c.

———. *The Great Growth of the Lake Coal Carriers.*—Black Diamond, May25, 1912; p. 17; 2500 w*; tables; 30c.

CRANES

See also under "Docks."

Broughton, H. H.—*Electric Cranes; Their Design, Construction and Application.*—London, 1911; pp. 812; 581 figs.; $9; (book).

Fiegehen, Edw. G.—*The Location and Arrangement of Control-Gear on Cranes.*—Mechl. World, Dec.8,1911, p. 270; Dec.22, p. —; 3000 w*; 35c.

Friedlaender, E.—*Electric Cranes for Steel-Mill Service;* [read to Iron & Steel Electr. Engrs.].—Mechl. World, Dec.8,1911,

p. 273; Dec.22, p. —; 3000 w; 35c. Also in Australian Mng. Standd., Apr.25,1912; p. 383; May2, p. 406; 3000 w; 50c. Also in Canadian Engr., May9, p. 627; 2700 w; 25c.

Hammond, E. K.—*Safeguards for Electric Cranes.*—Iron Age, May30,1912; p. 1336; 1600 w*; 30c.

Hermanns, H.—*Ueber Kranbauformen für Werkstätten;* [Cranes and mechanical handling equipment for machinery and engineering works].—Giesserei Ztg., Apr.15, 1912; p. 246; June15, p. 383; July1, p. —; 5000 w*; 80c.

Ketzler.—*Pufferbetriebe für elektrisch betriebene Aufzüge, Krane und dergleichen Einrichtungen mit intermittierendem Betriebe;* [Intermittent boosters for electric hoists, cranes, etc.].—E. T. Z., Apr.11, p. 366-368*; 50c.

Mellor, H. W. and A. M. Sims.—*The Design of Crane Girders;* [From "Engineering," Nov.24,1911].—Ind'l Engg., March, 1912; p. 184; 1000 w*; 30c.

Schorrig, —. *Moderne Transport- und Verlade-Einrichtungen für Kalisalze;* [Some modern loading, unloading and transport plants for potash salts].—Bergbau, Aug.31, 1911, p. 559; Sept.7, p. 75; 3000 w*; 45c. Also in Deu. Bergwerks Ztg., Suppl. No. 4, Nov.9,1911, p. 1; 1000 w*; 50c.

Vogel, W.—*Elektrische Ausrüstungen auf Hebe- und Transportmaschinen;* [Electrical equipment of hoisting, lifting and transporting machinery; desirable qualities, specifications, etc.].—Oberschles. Berg- & Hüttenm. Ver., Zts.; Feb.,1912; p. 59-62; 3000 w; 45c. Also in Oberschles. Elektrotechn. Ver., Mittlngn., March20, p. 78; 2400 w; 45c.

Voltz, H.—*Denkschrift betreffend die Verschiebung der Wettbewerbsverhältnisse für die schlesische Montanindustrie durch die Inbetriebnahme des Grossschiffahrtsweges Stettin-Berlin;* [Disturbance of the competitive relations of the Silesian mining industry—coal and zinc—by the opening of the Berlin-Stettin ship-canal]. — Oberschlesisch, Berg- u. Hüttenm. Ver., Zts., Nov.,1911, p. 471-509; 50c.

———. *Maschinelle Entladung von Mauersteinen;* [Cranes and mechanical unloading devices for bricks and building blocks].—Ton-Industrie Ztg., Jan.25,1912; p. 133; 800 w*; 30c.

———. *Musker & Davidson's 2-Ton Compensating Electric Luffing Cranes.*—Engnrg., Jan.26,1912; p. 128; 1000 w*; 30c. Also in Engg. News, May 2, p. 829; 600 w*; 25c.

———. *Neuzeitliche Verladebrücken für Eisenerze;* [Modern loading cranes for iron ores at German docks and furnaces].—Centralbl. d. Hütten u. Walzwerke, Dec.5,1911, p. 652; 1600 w*; 35c.

———. *New Electrical Crane Installation at the Grimsby Docks.*—El. Rev., Dec. 29,1911, p. 1068; 500 w*; 35c.

———. *Rapid Unloaders;* [Sand handling cranes and buckets for Panama].—Rock Products, Jan.,1912; p. 38; 600 w*; 30c.

LIFTING MAGNETS

Euler, —. *Untersuchungen eines Zugmagneten für Gleichstrom;* [Tests of a direct-current lifting magnet].—Elektr. Bahnen, Dec.14,1911, p. 701-710*; 75c.

Finzi, L.—*Sui magneti di sollevamento;* [Lifting magnets].—Met'l'gia Ital., Dec., 1911; pp. 782-795*; 45c.

Pfiffner, —. *Die Berechnung von Lasthebemagneten;* [Computations for lifting magnets].—E. T. Z., Jan.11,1912; p. 29-33*; Jan.18, pp. 57-60*; 75c.

Schömburg, —. *Neuere Magnetkrane im Hüttenbetriebe;* [Some newer lifting magnets in metallurgic works].—Annal. f. Gewerbe (Glaser's), Jan.15,1912; pp. 36-37*; 75c.

Selter, —. *Ueber die Entwicklung der Transportvorrichtungen mit Lastmagneten in Deutschland;* [Development of lifting magnets in Germany].—Centralbl. d. Hütten & Walkwerke, Feb.5,1912; p. 61; Feb. 15, p. 159; 4000 w*; 50c.

CABLEWAYS (AERIAL)

See "Haulage; Hoisting; Cables," in Chapter 9.

ELEVATORS AND CONVEYORS

See also Milling, Chapter 10. Descriptions of individual mills usually include references to elevators, conveyors, etc.

Avery, C. M.—*Feeders for Belt Conveyors.*—E. & M. J. June8,1912; p. 1121; 1800 w*; 25c.

Goldstein, H.—*A Machine for Economical Handling of Coal and Broken Stone;* [Portable bucket conveyor for loading from ore piles].—Engg. News, Feb.29,1912; p. 402; 500 w*; 25c.

Hermanns, H.—*Die mechanische Bekohlung von Kesselhäusern;* [The mechanical coaling of boiler houses].—Ton-industrie Ztg., Dec.5,1911, p. 1709; 2000 w; 35c.

Lindner, —. *Förderrinnen;* [Conveyors]. —Fördertechnik, Feb.,1912; p. 31-34*; March; pp. —; $1.

Loomans, D. J.—*The Coal Elevator;* [Elevator-conveyor at Waupun, Wis.].—Retail Coalman, May,1912; p. 53; 1200 w*; 35c.

Moss, L. DeG.—*A Study of Mechanical Conveyors.*—Columbia School of Mines Quar'ly, Jan.,1912; p. 136-154*; April, pp. 233-259*; $1.15.

Extract on belt conveyors in Met. & Chemi. Engg., June,1912; p. 346; 5000 w*; 35c.

Ridgway, J. J.—*Notes on the Use of Belt Conveyors.*—Power, March19,1912; p. 387; 2000 w; 15c. Reprint in Mechl. World, June14, p. 280; 35c.

Ridsdale, H. H.—*Coal Face Conveyors;* [Reviews principles and various types of conveyors; read to S. Staff. & Warwicks. Inst. of Mng. Engrs.; abstract].—Iron & Coal Trades Rev., Dec.22.1911; p. 1012; 3500 w; 30c. Also in Coll'y Guardn., Dec. 29; p. 1286; 6000 w*; 30c. Also in Coal Age, Feb.24, p. 643; 4000 w*; 20c.

Schleier, E.—*Becherwerke für Kalksandsteinfabriken;* [Elevators for sand-lime works].—Ton-Industrie Ztg., Feb.15, 1912, p. 255; 300 w; 25c.

Shubart, B.—*Link-Belt Elevators;* [at Stratton's Independence mill].—E. & M. J., Feb., 308; 800 w*; 25c.

Trautschold, Reg.—*Conveying and Elevating Machinery, Its Cost and Commercial Value; III: Screw (Spiral) Conveyors.*—Ind'l Engg., Dec.,1911, pp. 453-467; Jan.,1912, pp. —; 50c.

Trautschold, R.—*Conveying and Elevating Machinery; Use of Bucket Elevator in the Power Plant; Types, Capacities, Costs, Economical Application.*—Practl. Engr., Apr.15.1912; p. 411; May15, p. 509; 5000 w*; 30c.

Trautschold, R.—*Conveying and Elevating Machinery, Its Cost and Commercial Value; IV: Bucket Elevators.*—Ind'l Engg., Jan.,1912; p. 40; 2800 w*; 35c.

Trautschold, R.—*Conveying and Elevating Machinery; VI Suction Conveyors.*—Ind'l Engg., March,1912; pp. 178-183; 3500 w*; 30c.

———. *Bucket Elevator Chart;* [Graphic table for speed, capacity and size].—Coal Age, March23,1912; p. 775; 100 w*; 20c. Also in E. & M. J., March23, p. 592; 100 w*; 25c.

———. *Cutting the Loading Time of Wagons;* [Portable elevator-conveyor for loading wagons from storage piles].—Black Diamond, May4,1912; p. 17; 500 w*; 30c.

———. *Fördervorrichtungen;* [The Krupp tubular conveyor].—Ton Industrie Ztg., May25,1912; p. 867; 500 w*; 30c.

———. *Le transport automatique;* [Mechanical handling equipment at the Versailles gas works].—Echo d. Mines, Feb 26,1912, p. 253; 2000 w; 35c.

———. *Take-Up Device for Elevator Belts;* [For raising wet pulp and tailing, Joplin district, Mo.].—E. & M. J., Apr.20, 1912; p. 787; 500 w*; 25c.

———. *Transporteurs et élévateurs mobile;* [Some movable belt and crane conveyors].—Génie Civil, March2,1912; p. 353; 1000 w*; 50c.

———. *Traveling-Band Feeder for Tipple Screens.*—Coal Age, June8,1912; p. 1143; 500 w*; 20c.

———. *Unit Carriers;* [Stephens-Adamson belt conveyors].—Rock Products, Dec., 1911, p. 32; 1500 w*; 25c.

BINS AND POCKETS

Baumgartner, K.—*Bins for Ore Chutes.*—Queensl. Govt. Mng. Jnl., June,1912; p. 276; 800 w*; 35c.

Del Mar, Alg.—*Gate for Ore Bin Chutes.*—E. &M. J., Apr.13,1912; p. 735; 300 w*; 25c.

Ketchum, M. S.—*Walls, Bins and Grain Elevators.*—New York, 1911 (2d edition); 556 pp.; 266 figs.; $4; (book).

Smith, F. W.—*Gate for Ore-Bin Chutes.*—E. & M. J., Jan.20,1912; p. 157; 200 w*; 25c.

Storm, H. P.—*Flat-Bottomed Ore Bins;* [Favors them over inclined bottom].—M. & S. P., Apr.27,1912; p. 601; 800 w; 20c.

"Traveler."—*A Strong Pocket Built According to a New Idea.*—Black Diamond, Jan.6,1912, p. 18; 2000 w*; 30c.

"Traveler."—*Superimposed Bins to Save Pocket Room.*—Black Diamond, Dec.23, 1911, p. 17; 2000 w*; 25c.

———. *A 600-Ton Coal Bin and Tower;* [Storage at gas-producer plant of Republic Iron & Steel Co., Haselton, O.].—Engg. Record, Apr.20,1912; p. 428; 1000 w*; 20c.

———. *Bin for Concentrate;* [in mills of Joplin district, Mo.].—E. & M. J., May11, 1912; p. 936; 500 w*; 25c.

STEAM SHOVELS, BUCKETS

See under Excavators, etc., Chapter 8.

MOTOR TRUCKS; TRACTORS

Helfferich, Dr.—*Das Lastautomobil im Dienste der Bergwerks- und Hüttenindustrie;* [Motor truck transportation in the mining and metallurgical industries in Germany].—Kohle u. Erz, Jan.1,1912; p. 5; Jan.8, p. 26; 6000 w; 50c.

Kennedy, Wm. P.—*Economy of Motor Trucks in Hauling Coal.*—Retail Coalman, April,1912; p. 53; 2800 w; 25c.

Niles, R. L.—*Mechanical Haulage; Use of Steam Tractors on Highways.*—Cement Age, March,1912; p. 139; 1000 w*; 30c.

Warner, I.—*Motor Trucks;* [Read to National Builders' Supply Asso.].—Rock Products, March,1912; p. 22; 4000 w; 25c.

———. *A "Caterpillar Tractor" for Hauling over Soft Ground.*—Engg. & Contractg., Apr.24,1912; p. 462; 500 w*; 20c.

———. *Gasoline Hydraulic Truck;* American Lafrance type].—Iron Age, Feb.8, 1912; p. 358; 1200 w*; 30c.

———. *Handling Freight from Ships' Holds to Cars and Warehouses Using Motor Trucks;* [Baltimore, Md.].—Engg. Record, May25,1912; p. 571; 1800 w*; 25c.

———. *Hauling Structural Steel with Motor Trucks.*—Iron Trade Rev., Apr. 18, 1912; p. 851; 1500 w*; 20c.

———. *Motor Trucks for Mines* [in Nevada and Arizona].—E. & M. J., Apr.20, 1912; p. 796; 500 w*; 25c.

———. *Motor Trucks for Hauling Blasted Rock from City Aqueduct Tunnel, N. Y.;* [Loading shaft skips].—Engg. Record, March30,1912; p. 350; 1200 w*; 20c.

———. *Motor Truck Exhibit at the Chicago Show.*—Mining & Engg. World, Feb.3, 1912; p. 290; 1000 w; 10c.

———. *Motor Trucks; Economy of their Use in Handling Heavy Loads.*—Rock Products, Feb.,1912; p. 33; 1000 w*; 25c.

———. *Operating Cost of the Motor Truck;* [Tests by Erie Malleable Iron Co. of horse-drawn vs. motor truck for short haul].—Iron Age, May9,1912; p. 1143; 1600 w*; 30c.

———. *Ore Haulage By Means of Oil Tractors.*—Mng. Sci., Jan.25,1912; p. 112; 2600 w*; 25c.

———. *Some Notes on the Development of Motor Trucks for Contractors' Service, with Data Concerning Operating Cost;* [Pierce-Arrow, Saurer, Packard, Peerless, Speedwell and Mack types].—Engg. & Contractg., Feb.7,1912; p. 152; 3000 w*; 25c.

———. *Some Problems of Power Trucking.*—Engg. Record, May25,1912; p. 561; 600 w; 25c.

HAULING SUPPLIES AND MACHINERY IN UNDEVELOPED COUNTRY

See also under "Prospects and Prospecting."

Davis, Jas.—*Packing Supplies in a Mining Region;* [Saddling and pack-loading].—Mng. & Sc. Press, March23,1912; p. 431; 2800 w*; 20c.

———. *Hauling Heavy Machinery.*—E. & M. J., Jan.20,1912; p. 157; 600 w; 25c.

RAILROADS; MISCELLANEOUS

See also Haulage, Chapter 9.

Dresser, H. L.—*Experience with Steel Ties under Heavy Ore Traffic;* [Duluth. Missabe & Northern Ry., Minnesota; from Proc. of Amer. Ry. Engg. Asso.].—Engg. Record, March30,1912; p. 345; 1000 w; 20c.

Gaehr, D.—*Overhead Trolley Systems for the Foundry;* [Read to Amer. Foundrym. Asso.; abstract].—Castings, Feb.,1912; p. 145; 5000 w*; 25c.

Gjessing, O.—*The Operation of Electric Ore Roads in Sweden.*—Mining & Engg. World, May25,1912; p. 1085; 2000 w*; 10c.

Goodrich, H. C.—*Steam Shovels and Ore Shipping at Bingham, Utah;* [Read to Utah Soc. of Engrs.; abstract].—Salt Lake Mng. Rev., Oct.30,1911, p. 18; 1800 w; 25c. Also in M. & S. P., Nov.11, p. 624; 1800 w*;

20c. Also in Mining & Engg. World, Dec. 2,1911, p. 1114; 2000 w*; 10c. Also in Los Angeles Mng. Rev., Jan.6, 1912; p. 6; 1800 w*; 20c. Also in Engg. Record, Aug.17, p. 184; 3000 w*; 20c.

Hyde, M. D.—*Railroad Track Layout for Soft-Coal Mines.*—Coal Age, Jan.20,1912; p. 472; 2000 w*; 20c.

Laur, F.—*Le canal de Panama libre; son influence sur les mines et la métallurgie en Europe;* [The Panama Canal free; its influence on mining and metallurgy in Europe].—Echo d. Mines, Jan.4,1912; p. 1; 1000 w; 35c.

Masselon, E.—*La manutention mécanique dans la fonderie;* [Trolleys and mechanical transportation and handling in foundries].—Métallurgie, Apr.16,1912; p. —; Apr.23; p. 259; Apr.30; p. —; 2400 w*; 65c.

Michel, A.—*Methods and Cost of Operating Railways for the Storage of Materials in Bulk.*—Engg. & Contractg., May15,1912; p. 546; 1000 w*; 20c.

Pawlowski, A.—*Le transport des minerais de Meurthe-et-Moselle;* [Transportation problems and facilities in the iron ore fields of Est, France].—Echo d. Mines, Feb.1, 1912; p. 140; 2000 w; 35c.

Pawlowski, A.—*Une Normandie Inconnue; le Bassin Minier de la Basse-Normandie;* [The iron-mining and smelting industry in Basse Normandy, France].—Paris, 1911; pp. —; $1.00; (book).

Schott, O.—*Drahtverschluss für Zementsäcke;* [Wire bag-closing device for cement sacks].—Ton-Industrie Ztg., Feb.3,1912; p. 187; 1200 w*; 30c.

Springer, J. F.—*Mechanical Appliances on the Panama Canal;* [Power shovels, stone channelers, car unloading].—Cassier's Mag., Apr.,1912; p. 326-343*; 35c.

———. *Anthracite Coal Freights;* [From editorial discussion in "Scranton Times"].—Coal Age, Apr.27,1912; p. 946; 2000 w; tables; 20c.

———. *Coal Loading Booms at Annabelle Mine;* [Train loading at Worthington, W. Va., to prevent breaking].—Coal Age, May4,1912; p. 967; 750 w; 20c.

———. *Die Güterbewegung auf deutschen Eisenbahnen und den deutschen Wasserstrassen im Jahre* 1910; [The transportation of freight on German railroads and canals in 1910 and comparisons with 1907-09].—Archiv. f. Eisenbahnwesen, 1912, No. 1; pp. 147-201; 75c.

———. *Electrical Equipment of Gary Coke Plant;* [8,000-ton by-product plant of Indiana Steel Co.; handling, etc., apparatus].—Iron Age, Dec.28,1911, p. 1406; 2500 w*; 30c. Also in Iron Trade Rev., Dec.21, 1911. p. 1093; 2500 w*; 25c.

———. *New Side-Dump Ore Car* [at Bingham & Garfield, Utah].—Iron Trade Rev., Dec.28,1911, p. 1149; 500 w; 25c.

———. *The Storage of Portland Cement.*—Cement, Feb.1912; p. 276; 1000 w; 30c. Also in Rock Products, March, p. 30, 1000 w*; 30c.

———. *Versuche und Verbesserungen beim Bergwerksbetriebe* 1911; [Innovations and improvements in mining practice in Prussia in 1911; car tippers, cranes for culm piles, and surface handling equipment].—Zts. f. d. Berg-, H-, & Salinenw., Vol. 60, No. 1; 1912; pp. 116-120*; $1.50.

GENERAL TEXT-BOOKS

Michenfelder, C.—*Kran- und Transportanlagen für Hütten-, Hafen-, Werft-, und Werkstattbetriebe;* [Cranes and handling equipment for smelting works, harbors, docks and factories].—Berlin, 1912; 538 pp.; 700 figs.; $8; (book).

Pacoret, E.—*Les appareils de levage, de transport et de manutention mécanique dans les usines, chantiers de travaux publics, entrepôts, docks, ports, mines, chemins de fer, etc.;* [Hoisting, Transporting and Handling Machinery].—Paris, 1912; 180 pp; 426 figs; $3 (book).

Pratt, E. A.—*A History of Inland Transport and Communication in England.*—London, 1912; pp. —; (book).

Ore Genesis; Mining Geology

MINE AND UNDERGROUND WATERS

See also Drainage, Chapter 8; also "Petroleum" (Water Problem in Oil Fields).

Albrecht, —. *Ueber die Abhängigkeit der Gefähr eines Wassereinbruchs auf den rheinisch-westfälischen Steinkohlengruben von der verschiedenen Ausbildung des Deckgebirges;* [Relation between overlying rocks and danger of flooding of coal mines in the Rhine-Westphalia region].—Deu. Bergwerks Ztg., Suppl. No. 5; Nov.18,1911, p. 1; 2000 w; 50c.

Frech, Fr.—*Schlesien's Heilquellen in ihrer Beziehung zum Bau der Gebirge;* [The mineral and healing springs of Silesia, and their relation to geologic structure].—Berlin, 1912; 101 pp; $1 (book).

Häberle, D.—*Ueber die Herkunft der Salzquellen im Rotliegenden des Alsenz-, Glan-, und Nahegebietes;* [Origin of the salt springs in the Red Beds of the Alsenz-Glan districts; from Oberrhein. Geol. Ges., Jahrb., Vol. 2, No. 1; brief abstract].—Kali, May1,1912; p. 210; 250 w; 35c.

Melik-Nibaroff, L.—*Beobachtungen über die Erschöpfung der Erdölhorizonte der Parzelle No. 8 (Firma "Runo") auf Bibi-Eibat und die Erklärung ihrer Verwässerung;* [Determination of the water-bearing horizons on Lot 8, Bibi-Eibat district, and the causes of the flooding of the oil wells].—Kaiserl. Russ. Techn. Ges., Bakou section; Trudy No. 5 and 6, 1911; pp. —*; $1. Abstract in German in Petroleum, March20, 1912; p. 659; 1000 w; 45c.

Schafarzik, F.—*Ueber die wichtigsten Mineralstoffe und Wasserschätze enthaltenden geologischen Horizonte in Ungarn;* [The more important mineral-bearing and aquiferous formations in Hungary; read to 25th Internatnl. Bohringenieur, etc., Wandersammlung].—Organ d. Bohrtechniker, Dec.1,1911, p. 273; 3600 w*; 35c.

Strischoff, J. N.—*Die Feststellung der Horizonte für Wasserabsperrung in den Sonden vom mittleren Teil des Grosnyschen Erdöldistrikts;* [Determination of the water-bearing horizons to be shut off in the central Grosny oil field].—Kaiserl. Russ. Techn. Ges., Grosny section, Arbeiten, 1911, No. 3; 16 pp.

Abstract in Petroleum, Jan.3,1912; p. 351; 500 w; 45c.

Tombelaine, A.—*Géologie et hydrologie du bassin de la Réunion, à Villaneuva Minas, Séville, Espagne;* [Geology and hydrology of Reunion coal basin, Seville, Spain].—Soc. de l'Ind. Minérale, Bull., Feb.,1912; pp. 185-220*; $1.

Weed, W. H.—*Geysers;* [Occurrences in Iceland, New Zealand and U. S.; origin, etc.].—U. S. Dept. of Interior publication; 1912; 29 pp*; 20c.

———. *Juvenile Waters and Hypotheses.* M. & S. P., Feb.3,1912, p. 194; 1000 w; 20c.

EARTH AND ROCK PRESSURES

See under "Supports," Chapter 8.

Bartonec, Fr.—*Ueber die Ursachen von Oberflächenbewegungen im Ostrau-Karwiner Bergrevier;* [The causes of surface subsidence and movement in the Ostrau-Karwin coal basin, Austria].—Montanist. Rundschau. Feb.16,1912; p. 145-156*; March1, pp. 211-215; March16, p. 247-249; 90c.

Hepplewhite, W. H.—*The Action and Control of Differently Constituted Coal-Bed Roofs;* [Read to Midland Counties Instn. of Engrs.].—Iron & Coal Trades Rev., Dec. 15,1911, p. 970; 6000 w; 30c. Also in Coll'y Guardn., Dec.22, p. 1247; March8, p. 481; 7000 w; 50c. Also in Coal Age, March23, p. 779; 1200 w; 20c.

King, L. V.—*On the Limiting Strength of Rocks under the Conditions of Stress Existing in the Earth's Interior.*—Jnl. of Geol'y, Feb.-March,1912; pp. 119-138*; 65c.

Morin, —. *Des effets de pressions de terrains dans les exploitations houillères;* [Effects of earth pressures on various phases of coal mining].—Soc. de l'Ind. Minrl. St. Etienne, C-R., Oct.,1911, p. 604; 750 w; 75c.

Thiriart, L.—*Les affaissements du sol produits par l'exploitation houillère;* [Soil subsidences as produced by coal mining in Belgium].—Annales d. Mines (Belgiq.), 1912, No. 1, pp. 3-64*; 95c.

von Willmann, E.—*Ueber einige Gebirgsdruckerscheinungen in ihren Beziehungen zum Tunnelbau;* [Some rock-pressure phenomena in their bearing on tunnelling].—Darmstadt Techn. Hochschule Dissert., 1911; pp. —; $1 (Thesis).

ROCK AND DEEP TEMPERATURES

See also under "Ventilation."

Höfer, Hans von.—*Die Temperaturen in den Erdölgebieten;* [Earth temperatures as revealed in oil-well drillings].—Organ d. Bohrtechniker, Dec.1,1911, p. 279; 1600 w; 45c.

Königsberger, J.—*Ueber Messungen der geothermischen Tiefenstufe, deren Technik und Verwertung zur geologischen Prognose, und über neue Messungen in Mexico, Borneo und Mitteleuropa;* [The measurement of deep rock temperatures, and the value of the knowledge of isogeotherms in geologic prospecting; with notes on new measurements in Mexico, Borneo and central European oil fields].—N. Jahrb. f. Mineralogie, Geol., etc.; Beilagebd. Vol. 31; 1911; pp. —; (book).

Lauchli, E.—*Determination of Probable Rock Temperature in a Continental Divide Tunnel;* [deeply overlaid 6-mile tunnel under continental divide, Colorado].—Engg. Record, June8,1912; pp. 619-622; 4000 w*; 25c.

MacDonald, D. F.—*Heating of Local Areas of Ground in the Culebra Cut, Panama;* [abstract from "Science"].—Engg. Record, May25,1912; p. 584; 1500 w; 25c.

Michael, R., and W. Quitzow.—*Temperaturmessungen im Tiefbohrloch Czuchow II, Oberschlesien;* [Temperature records in the Czuchow drill hole, Silesia, world's deepest boring].—Zentralbl. f. Mineralogie, etc., Feb.,1912; p. 43-45; $1.

MINERALIZATION

Bain, H. F.—*Introduction;* [Growth of the study of ore deposits in the U. S.].—"Types of Ore Deposits," by H. F. Bain and others; 1911; pp. 9-32.

Beyer.—*Alaun und Gips als Mineralneubildungen und als Ursachen der chemischen Verwitterung in den Quadersandsteinen des sächsischen Kreidegebietes;* [Alums and gypsum as secondary minerals and as causes of the weathering and alteration of the Quader sandstone formation in the Cretaceous of Saxony.—Deu. Geol. Ges., Zts., Vol. 63, No. 4, 1912; pp. 429-467*; $1.

Blackmore, H. S.—*The Facts About Gold, Silver and Iodine in Sea Water.*—Cassier's Mag., Jan.,1912; p. 3; 3500 w; 35c.

Böhm, Dr.—*La génesis de las tierras raras;* [Genesis of the rare earths].—Madrid Cientifico, Feb.15,1912; p. 85; 1100 w; 35c.

Brun, G., and D. Meneghini.—*Bildung metallischer fester Lösungen durch Diffusion im feste Zustande;* [Formation of solid metal solutions by diffusion in the solid condition].—Internat. Zts. f. Metallogr., Oct.,1911; p. 26-35; 95c.

Dittler, E.—*Zweck und Ergebnisse der Mineralsynthese;* [Artificial production of minerals; methods, aims and results, especially as regards mineral genesis].—Naturw. Umschau, March,1912; p. 21; 5000 w*; 35c.

Emmons, Wm. H.—*Outcrop of Ore Bodies.*—"Types of Ore Deposits," by H. F. Bain and others; 1911; pp. 299-353*.

Reprinted from Mng. & Sc. Press, Dec. 4 and Dec.11,1909.

Friedmann, A.—*Neue chemische Analysen vom Wasser des Toten Meeres;* [New chemical analyses of the Dead Sea brines].—Chemiker Ztg., Feb.6,1912; p. 147; 500 w; 30c.

Friedrich, K.—*Untersuchungen über den Goldgehalt von Gebirgsproben und Solen deutscher Salzlagerstätten;* [The gold content of the rocks of German rock-salt deposits and brines].—Inst. f. Metallographie & Probierkunde an Freiberg, Mittlngn. f. 1910; pp. 73-75; $3.20.

Garrison, F. L.—*Decrease of Value in Ore Shoots with Depth.*—Canadian Mng. Inst., Jnl., No. 16, Oct.,1911. pp. 63-79; $1.20.

Abstract in Mng. Sci., Feb.8,1912; p. 152; 2500 w; 20c. Also in Mining & Engg. World, Feb.10, p. 346; 3000 w; 10c. Also in M. & S. P., Apr.20, p. 558; 5500 w*; 20c. Also in Queensl. Govt. Mng. Jnl., Apr.15, p. 161; 2500 w; 35c.

Gottschalk, V. H., and H. A. Buehler.—*Oxidation of Sulphides.*—Econ. Geol'y, Jan., 1912; p. 15-34*; 65c.

Hatschek, E., and A. L. Simon.—*Gels in Relation to Ore Deposition;* [Studies of diffusion and solubility of gold chlorides, etc., in gelatines and silicic acid gels].—Instn. of Mng. & Met'l'gy, Bull. 91, Apr., 1912; 9 pp.*; 50c. (Discussion), Bull. 92, May, pp. 3-22; 50c.

Abstract of paper in Mng. Sci., July4, p. 561; 2100 w; 20c. Also in Mining & Engg. World, Aug.17, p. 280; 3800 w; 10c.

Headden, Wm. P.—*The Occurence and Origin of Nitrates in Colorado Soils.*—Colo. Scient. Soc., Proc., Vol. X, Nov.,1911; pp. 99-122; 65c.

Hixon, H. W.—*Unsolved Problems of Geology;* [Conditions controlling mineralizing drainage underground].—Mines & Methods, Dec.,1911, p. 361; 6500 w*; 25c.

Hore, R. E.—*Decrease of Values in Ore Shoots with Depth;* [Michigan copper; Cobalt, Ont., silver; Porcupine, Ont., gold].—Canadian Mng. Jnl., Apr.15,1912; p. 260; 4000 w; 25c.

Irving, J. D.—*Replacement Ore Bodies; Their Characteristics and the Criteria by Means of Which They May be Recognized.*

—"Types of Ore Deposits," by H. F. Bain and others; 1911; pp. 220-298*. Also in Canadn. Mng. Inst., Bull. 17, Dec.,1911 (read 1910); pp. 3-79*; $1.15. Also in Econ. Geoly., Sept.,1911, p. 527-562*; Oct., p. 619-670*; $1.20.

Jones, H. C.—*The Theory of Solution.*—Franklin Inst., Jnl.; March,1912; pp. 217-238; 65c. Abstract in E. & M. J., March 30, p. 653; April6, p. 696; Apr.20, p. 800; 19,000 w*; 65c.

Keyes, C. R.—*A Chart of Ore Deposition;* [Discusses supposed paths of mineralizing descending waters].—M. & S. P., June 1,1912; p. 763; 500 w*; 20c.

Kirk, Chas. T.—*Conditions of Mineralization in the Copper Veins at Butte, Mont.*—Econ. Geol'y, Jan..1912; pp. 35-82*; 65c. Abstract in Mng. Sci., April4,1912; p. 311; 3200 w; 20c.

Knox, H. H.—*Criteria for Replacement Ore Bodies;* [Discusses abundance of replacement deposits, especially pyrites, in non-limestone formations].—Econ. Geol'y, April-May, 1912; p. 295- 750 w; 65c.

Lane, A. C.—*Native Copper Deposits.*—"Types of Ore Deposits," by H. F. Bain and others; 1911; pp. 133-139*. Reprint from Canadian Mng. Inst., Bull., 1911.

Abstract in Mining World, April8,1911, p. 731; 2700 w; 10c. Also in W. Australian Mng., etc., Jnl., May27,1911; p. 8; 2700 w; 50c. Also in Mng. Sci., Feb.29, 1912; p. 211; 2000 w; 20c.

Liesegang, R. E.— *Die Entwickelungsgeschichte der Achate;* [Genesis of agates].—Aus der Natur, 1911, No. 18, pp. 561-566*; 75c.

Lindgren, W.—*Some Modes of Deposition of Copper Ores in Basic Rocks.*—Econ. Geol'y, Oct.-Nov.,1911, p. 687-701; 65c.

Abstract on zeolite-bearing copper in Mining & Engg. World, Dec.30,1911, p. 1311; 2500 w; 10c.

Martin, F. J.—*Gold Deposited by Magnetic Electric Currents.*—M. & S. P., Feb.24, 1912; p. 314; 1000 w; 20c.

McCombie, J.—*Deep Mining;* [Discusses continuity of ore bodies, or discontinuity, with depth].—Mng. Mag., March,1912; p. 203; 1000 w: 35c.

Miller, G. W.—*Two Phases in the Genesis and Precipitation of Ore Deposits;* [Studies on chemical solution in mineralization].—Mining & Engg. World, May25,1912; p. 1095; June1, p. 1151; 5500 w; 20c.

Miller, G. W.—*The Original Source of Metalliferous Ores.*—Mining & Engg. World. March2,1912; p. 515; 2400 w; 10c.

Penrose, R. A. F., Jr.—*Some Causes of Ore-Shoots.*—"Types of Ore Deposits," by H. F. Bain and others; 1911; pp. 324-353*.

Platts, J. B.—*Occurrence of Gold "Pockets" in Josephine County, Oregon.*—Mining & Engg. World, Apr.27,1912; p. 909; 1000 w; 10c.

Rogers, A. F.—*Occurrence and Origin of Gypsum and Anhydrite at the Ludwig Mine, Lyon County, Nevada;* [Copper mine].—Econ. Geol'y, Feb.-March,1912; pp. 185-189; 65c.

Soper, E. K.—*Modern Theories of Ore Deposition.*—Mex. Mng. Jnl., Feb.,1912; p. 22; March, p. 38; 10,000 w; 35c. Also in Mines & Methods, April, p. 449; 10,000 w; 25c.

Stevens, Blamey.—*Forms and Criteria of Replacement Ore Bodies.*—Econ. Geol'y, Feb.-March,1912; p. 195-201; 65c.

Tornow, Dr.—*Ueber die Genesis der Schwerspat- und Flusspatgänge des Thüringer Waldes;* [Genesis of the baryte and fluorspar veins of the Thuringian Forest].—Deu. Bergwerks Ztg., Suppl. No. 7; Dec. 9,1911, p. 1; No. 8, Dec.20, p. 1; 3000 w; 50c.

Tolman, C. F.—*Magmatic Origin of Ore-Forming Solutions.*—M. & S. P., March16, 1912; p. 401; 6000 w; 20c.

Tovote, W. L.—*Magmatic Origin of Ore-Forming Solutions;* [In Arizona copper district, especially; discusses Tolman's paper].—M. & S. P., Apr.27,1912; p. 601; 1500 w; 20c.

Weber, M. G.—*Kritische Studien über die Darstellungsweisen von Selen- und Tellurwasserstoff;* [Methods of production of hydrogen selenides and tellurides].—Dresden Techn. Hochschule dissert., 1911; pp. —; (thesis).

Winchell, H. V.—*Secondary Sulphide Enrichment.*—E. & M. J., Feb.17,1912, p. 364; 5000 w; 25c.

VULCANISM; METAMORPHISM CONTACT DEPOSITS

Adams, F. D.—*An Experimental Contribution to the Question of the Depth of the Zone of Flow in the Earth's Crust.*—Jnl. of Geol'y, Feb.-March1912; p. 97-118*; 65c.

Bergeat, Alfr.—*La granodiorita de Concepcion del Oro en el Estado de Zacatecas y sus formaciones de contacto;* [The granodiorites of Concepcion del Oro, Zacatecas, and geology of the contact ore deposits; metasomatic chalcopyrite at contact, copper vein in granodiorite; lead-zinc-silver in limestone; auriferous quartz veins].—Inst. Geol. Mex., Bol. 27; 1911; 109 pp*; $1.

Bowen, N. L.—*The Binary System: $Na_2Al_2Si_2O_8$ (Nephelite, Carnegieite)—$CaAl_2Si_2O_8$ (Anorthite).*—Amer. Jnl. of Sci., June,1912; p. 551-574; 65c.

Chamberlain, T. C.—*The Bearings of Radio-activity on Geology;* [Source of internal heat of the earth].—Jnl. of Geol'y, Nov.-Dec.,1911, pp. 673-695; 65c. Abstract in Mining & Engg. World, Feb.17, p. 397; 3800 w; 10c.

Fábrega, P.—*La edad de la tierra;* [The condition of the earth; its origin and present and future character].—Rev. Minera, Dec.16,1911, p. 618; 6000 w; 45c. Also in Madrid Cientifico, Dec.15, p. 681; 6000 w; 35c.

Fuller, M. L.—*The New Madrid Earthquake;* [southeast Missouri, 1811-1812].—U. S. Geol. Survey, Bull. 494; 1912; 119 pp*; 10c.

Hollmann, E.—*Ueber Basalteisenstein des nordwestlichen Vogelsberges;* [The basaltic iron ores of the northwestern Vogelsberg range, Hessen: Giessen dissertation, 1909; abstract].—Erzbergbau, May 15.1912; p. 171; 1600 w; 35c.

Johnson, J. E., and B. F. Tibby.—*Field Classification of Igneous Rocks.*—Salt Lake Mng. Rev., March30,1912; p. 17; 1500 w; chart; 25c.

Kemp, Jas. F.—*Contact Deposits;* [Genesis of iron, copper and other contact orebodies].—"Types of Ore Deposits," by H. F. Bain and others; 1911; pp. 190-201.

Kôzu, S.—*Preliminary Notes on Some Igneous Rocks of Japan; V: Potash-Rhyolite.*—Jnl. of Geol'y, Jan.-Feb.,1912; p. 45-48; 70c.

Lacroix, A.—*Les syenites néphéliniques de l'archipel de Los et leurs minéraux;* [The nepheline syenites of the Los I'ds., French Guinea, and their mineralogy].—

Mus. d'Hist. Nat. (Paris), Nouv. Archives, Ser. 5, Vol. III, pp. 1-132; 10 plates; 1911. Brief review, Amer. Jnl. of Sci., Jan., 1912; p. 68; 500 w; 65c.

Lahee, F. H.—*Relations of the Degree of Metamorphism to Geological Structure and to Acid Igneous Intrusions in the Narragansett Basin, Rhode Island.*—Amer. Jnl. of Sci., March.1912; pp. 249-262*; April, pp. 354-372*; May, pp. 447-469*; $1.65.

Leith, C. K. and W. J. Mead.—*Metamorphic Studies;* [The metamorphis cycle].—Jnl. of Geol'y, May-June,1912; p. 353; 3500 w; 65c. Abstract in Mining & Engg. World, July6, p. 19; 3000 w; 10c.

Loughlin, G. F.—*The Gabbros and Associated Rocks at Preston, Connecticut.*—U. S. Geol. Surv., Bull. 492; 158 pp*; 10c.

Marc, R.—*Referat über die bis zum Jahre* 1911 *aus dem Geophysical Laboratory, Carnegie Institution in Washington hervorgegangen Arbeiten;* [Review of work of the Geo-Physical Laboratory, Washington, up to 1911 on the melting of silicates].—Zts. f. Elektrochemie, Jan.1,1912; p. 2; 8000 w; 40c.

Rogers, G. S.—*The Geology of the Cortland Series and its Emery Deposits.*—N. Y. Acad. Sci,., Annals; Vol. 21, 1911, pp. 11-86; $3. Brief abstract in Jnl. of Geol'y, Apr.-May,1912; p. 278; 150 w; 65c.

Sederholm, J. J.—*Om de tekniska egenskaperna hos finska graniter;* [The granites of Finland].—Finland Geol. Kommiss Geotekn. Mem. No. 8; 1911; 38 pp; 14 figs; 50c.

Spezia, G.—*Sopra alcuni presenti offetti chimici della pressione nel metamorfismo minerale;* [Some present-day effects of pressure during rock metamorphism].—Turin, 1911; 19 pp.; pamphlet.

Stevens, B.—*Physical Data of Igneous Emanation;* and *The Laws of Igneous Emanation Pressure.*—Amer. Inst. Mng. Engrs., Bull. 64, Apr.,1912; p. 411-438*; $1.15.

Winchell, A. N.—*Brun's New Data on Volcanism;* [Reviews Brun's "Recherches sur l'Exhalaison Volcanique"; fusing points of minerals; volcanic gases and magmatic waters].—Econ. Geol'y, Jan.,1912; p. 1-14; 65c.

Zapffe, C.—*Effects of a Basic Igneous Intrusion on a Lake Superior Iron-Bearing Formation;* [Gunflint district, Minn.].—Econ. Geol'y, Feb.-March,1912; pp. 145-178*; 65c.

S. T. A.—*Seismic Unrest and Falls of Roof.*—Coal Age, March16,1912; p. 751; 1000 w; 20c.

———. *Earthquakes and Mine Explosions;* [Resumé of discussion before Internatnl. Asso. of Seismology].—Coal Age, March9,1912; p. 702; 1400 w; 20c.

FAULTS; FOLDS; MAJOR STRUCTURES (TECTONICS)

Ampferer and Hammer.—*Geologischer Querschnitt durch die Ostalpen vom Algäu zum Gardasee;* [Geological section of the East Alps from Algoi to Lake Garda].—Oestr. Ungarn KK. Geol. Reichsanst., Jahrb., Vol. 61, No. 3, 4; 1912; pp. 531-710*; $2.

Bustamante, M.—*Observaciones sobre la edad relativa de dos sistemas de vetas que se cortan; etc.;* [Notes on geology of intersecting veins, and the production of veinfaults in nature and artificially].—Mex. Instn. of Mng. & Met'l'gy, Trans.; Vol. 2, No. 6; 1912; pp. 222-230; 3000 w; 75c.

Grupe, —. *Ueber das Alter der Dislokationen des hannoversch-hessischen Berglandes und ihren Einfluss auf Talbildung und Basalteruptionen;* [Geologic age of the dislocations in the Hannover-Hessian mountain region, and influence on valley erosion and basalt eruptions].—Deu. Geol. Ges., Zts., Vol. 63, No. 3; 1911; pp. 289-316*; $2.00.

Hall, R. D.—*Determinants of Coal Thickness;* [Thickness of a coal seam in folds, rolls and under pressure].—Coal Age, Feb. 10,1912; p. 566; 2200 w*; 20c.

Lodin, —. *Tectonique du bassin houiller du Nord et du Pas-de-Calais;* [Geologic structure of the Nord and Pas-de-Calais coal basin].—Soc. de l'Ind. Minrl. St. Etienne, C-R., Oct.,1911, p. 602; 1000 w; 50c.

Sheldon, P.—*Some Observations and Experiments on Joint Planes.*—Jnl. of Geol'y, March,1912; pp. 164-183*; 65c.

Webber, M.—*Cross-Fractures and Ore Shoots.*—M. & S. P., March9,1912; p. 380; 1200 w; 20c.

TEXT-BOOKS; GENERAL WORKS

Bain, H. F., and others.—*Types of Ore Deposits.*—San Francisco, Cal.; 1911; 378 pp.*; $2 (book). For contents see under H. F. Bain; C. H. Smyth, Jr.; C. K. Leith; E. R. Buckley; A. C. Lane; S. F. Emmons; O. H. Hershey; T. A. Rickard; J. F. Kemp; F. H. Hatch; J. D. Irving; W. H. Emmons; R. A. F. Penrose, Jr.

Beck, R.—*Ueber die Bedeutung der Mikroskopie für die Lagerstättenkunde;* [Importance of microscopy in the study and teaching of ore genesis; rector's address, Freiberg].—Freiberg, Saxony; 1911; 16 pp.; $1.00; (pamphlet).

Beyschlag, F., P. Krusch and J. H. L. Vogt.—*Die Lagerstätten der nutzbaren Mineralien und Gesteine nach Form, Inhalt and Entstehung, 2te Band: 1ste. Hälfte;* [Monograph of the Deposits of Useful Minerals and Rocks, Classified by Structure, Composition and Origin; 3 volumes. Vol. 2. Part 1: Fissures and fissuring, secondary gold-silver lodes, original gold lodes, metasomatic gold deposits, old or original lead-silver-zinc lodes, radium lodes, metasomatic lead-silver-zinc ores, antimonial lodes].—Stuttgart, 1912; 290 pp.; 66 figs.; $2.50 (book).

Brooks, Alfr. H.—*Applied Geology—A Review of Progress;* [Presidential address, Geol. Soc. of Washington, Dec.,1911].—Washington Acad. of Sci., Jnl., Jan.19, 1912; pp. 19-48; $1. Reprinted in Geol. Soc. of Washington, Proc. f. 1911; $1. Abstract in M. & S. P., Feb.10,1912; p. 234; 6000 w; 20c.

Dwerryhouse, A. R.—*Geological and Topographical Maps; Their Interpretation and Use.*—London, 1911; pp. —; $1.75; (book).

Emich, Fr.—*Lehrbuch der Microchemie;* [Textbook of Microchemistry].—Wiesbaden, 1912; 225 pp.; 30 figs.; $2.25 (book).

Krusch, P.—*Die Untersuchung und Bewertung von Erzlagerstätten;* [Examination and Valuation of Ore Deposits].—Stuttgart, 1911 (2d edition); pp. xxiv, 569; 125 figs., $5.50; (book).

Leitmeier, —. *Zur Petrographie der Stubalpe in Steiermark;* [Petrography of the acidic and basic crystallines in the Gratz district, Styria.]—Oestr-Ungarn KK. Geol. Reichsanst., Jahrb., Vol. 61, No. 3, 4; 1912; pp. 453-471*; $2.

Leo, Max.—*Die Anlauffarben; Eine neue Methode zur Untersuchung opaker Erze*

und Erzgemenge; [Annealing colors, a new method of examination of opaque ores and ore mixtures].—Dresden, 1911; pp. —; $1 (book).

Lindemann, B.—*Die Erde,* 1. *Band: Geologische Kräfte;* [The Earth; Popular Geology; Vol. 1: Geologic Forces].—Stuttgart, 1911; 408 pp.; 322 figs.; 26 plates; $3; (book).

Rheinisch, R.—*Petrographisches Praktikum; 2: Gesteine;* [Handbook of Petrography; 2: Rocks].—Berlin, 1912 (2d edition); 224 pp.; 49 figs.; $2.50 (book).

Rhodes, J. E. W.—*Micropetrology for Beginners.*—London, 1912; 142 pp*; $1 (book).

Rogers, A. F.—*Introduction to the Study of Minerals.*—New York, 1912; 522 pp*; $3.50 (book).

Weinschenk, E.—*Petrographic Methods;* [Translation of Weinschenk's manual by R. Watson Clark].—New York, 1912; 400 pp.*; $4.50 (book).

Wright, F. E.—*The Methods of Petrographic-Microscopic Research; Their Relative Accuracy and Range of Application.*—Carnegie Instn., Publication No. 158; 1911; pp. 204; 129 figs.

GEOLOGY OF GOLDFIELDS

See also under Gold, Chapter 4.

Baelz, W.—*Reisebericht aus den Goldfeldern des nördlichen Ontarios;* [Notes on a trip to the goldfields of northern Ontario].—Zts. f. prakt. Geol., Nov.,1911, pp. 377-385*; 75c.

English translation by Prof. T. L. Walker, "The Goldfields of Northern Ontario," in Canadian Mng. Jnl., May1, p. 299; 6000 w*; 25c.

Baragwanath, J. G.—*Notes on the Geology of the Zaruma Mines, Ecuador* [Gold].—Columbia School of Mines Quar'ly, Jan., 1912; p. 160; 1500 w*; 65c. Abstract in Mng. Sci., May2, p. 389; 1500 w*; 20c.

Bleloch, W. E.—*The Geology of the Rand;* [Discussion of Mellor's paper before Geol. Soc. of S. Afr.].—S. Afr. Mng. Jnl., Apr.13,1912; p. 248; May11, p. 387; 4500 w; 50c.

Bonillas, Y. S.—*Algunos datos geologicos sobre el mineral "La Campana";* [Geologic notes on the "La Campana" mine, Altar district, Sonora].—Soc. Geol. Mex., Bol.; Vol. 7, No. 2; pp. 155-168*; $2.

Buckley, E. R.—*Geology of the Jarbidge Mining District, Nevada.*—Mining & Engg. World, Dec.16,1911, p. 1209; 2800 w*; 10c.

Burrows, A. G.—*The Porcupine Gold Area of Northern Ontario;* [Geology; summary of more complete official report].—Canadian Mng. Inst., Jnl., No. 16, Oct.,1911, pp. 59-63; $1.20.

Collins, J. H.—*Observations on the West of England Mining Region;* [Tin, tungsten, copper, lead, china clay, etc.].—Roy. Geol. Soc. of Cornwall, Trans.; Vol. XIV; 1912; pp. 684]; (book).

Davis, N. B.—*The Character and Possible Origin of the Green Dolomites of Northern Ontario* [*Gold Fields*].—Canadian Mng. Inst., Jnl., No. 16, Oct.,1911, pp. 173-184*; $1.20.

Granigg, B., and M. Lazarevic.—*Zur Systematik der Lagerstätte "Schneeberg" in Tirol;* [Controversy on composition and mineralization of the Schneeberg auriferous ore body in the Tirol].—Zts. f. prakt. Geol., April,1912; p. 164; 3000 w; $1.

Hatch, F. H.—*The Conglomerates of the Witwatersrand;* [Geology and genesis].—"Types of Ore Deposits," by H. F. Bain and others; 1911; pp. 202-218*.

Hershey, O. H.—*Geology of the Pis Pis Mining District in Nicaragua.*—M. & S. P., Feb.17,1912; p. 270; 3500 w*; 20c.

Hershey, O. H.—*Geology at the Treadwell Mines, Alaska.*—"Types of Ore Deposits," by H. F. Bain and others; 1911; pp. 157-171

Reprinted from Mng. & Sc. Press, Feb.25 and March4,1911.

Horwood, C. B.—*The Geology of the Rand;* [Read to Geol. Soc. of S. Afr.; discusses Mellor's paper].—S. Afr. Mng. Jnl., Feb.17,1912; p. 867; Feb.24, p. 903; 5000 w; 50c.

Larcombe, C. O. G.—*Notes on the Geology of Kalgoorlie.*—Australasian Inst. Mng. Engrs., Memoirs; 1911; 308 pp*.

Review in Australian Mng. Standd., Jan. 18,1912; p. 49; Jan.25, p. 75; 4000 w; 50c.

McMillan, J. G.—*Report on the Geology of the Area Along the T. & N. O. Ry., Trial Line Between Gowganda and Porcupine.*—Toronto, 1912; 24 pp*; 75c.

Abstract in Mining & Engg. World, July 20, p. 110; 2100 w; 10c.

Mellor, E. T.—*Bezuidenhout Valley and Reitfontein Geology;* [Key section of Lower Witwatersrand strata in central Rand region; read to Geol. Soc. of S. Africa].—S. Afr. Mng. Jnl., March30,1912; p. 157; May 18, p. 415; 3600 w; 50c. Also in S. Afr. Engg., June, p. 98; 6000 w*; 35c.

Mellor, E. T.—*Geology of the Witwatersrand;* [Stratigraphic structure; read te Geol. Soc. of S. Afr.; abstract].—S. Afr. Mng. Jnl., Jan.6.1912; p. 643; Jan.13, p. 671; Jan.20, p. 709; Apr.20, p. —; Apr.27, p. 317; 12,000 w*; 95c.

Minnich, —. *Die Fortschritte der Goldaufbereitung und ihre Beziehung zur Lagerstätteniehre;* [Recent progress in metallurgy of gold, and bearing on the nature and geology of gold ores].—Zts. f. prakt. Geologie, Dec.,1911, pp. 432-466*; 75c.

Moore, E. S.—*The Sturgeon Lake Goldfield.*—Ontario Bureau of Mines, 20th Ann. Rep., 1911; pp. 133-157*; $1. Reprinted in Canadian Mng. Jnl., Nov.1,1911; p. 701; 7500 w*; 25c. Abstract in Mng. Sci., March 21,1912; p. 272; 2000 w*; 20c.

Morgan, P. G.—*The Geology of the Greymouth Subdivision, North Westland, N. Z.*—N. Z. Geol. Surv., Bull. 13, 1912; 159 pp*; $1.50.

Rickard, T. A.—*The Domes of Nova Scotia.*—Instn. of Mng. & Met'l'gy; Bull. 90, March,1912; 55 pp.*; 50c. (Discussion), Bull. 92, May, pp. 35-38; 50c.

Abstract in M. & S. P., March30,1912; p. 492; 3200 w*; 20c. Also in Canadian Mng. Jnl., April1.1912; p. 224; April5, p. 273; May1, p. 310; May15, p. 345; 16,000 w*; 80c. Also in M. & S. P., March30, p. 492; 4000 w*; 20c. Also in Ind'l Advocate, April,1912; p. 7; May, p. 7; June, p. 7; 16,000 w; $1.00.

Rickard, T. A.—*The Saddle Reef;* [Geology and genesis of Bendigo, Vict., ore bodies].—"Types of Ore Deposits," by H. F. Bain and others; 1911; pp. 172-189*.

Roldán, L. V.—*Estudio geologico y minero de la sierra de El Oro, Durango;* [Geology of the ore deposits of the El Oro range, Durango; gold, silver, copper].—Soc. Geol. Mex., Bol.; Vol. 7, No. 2; 1911; pp. 125-134; $2.

Schumacher, F.—*Die Golderzlagerstätten und der Goldbergbau der Rudaer Zwölf-Apostel-Gewerkschaft zu Brád in Siebenbürgen;* [The gold ore deposits and lig-

nites of the Ruda Zwölf-Apostel Co., Brad, Transylvania].—Berlin, 1912; 114 pp; 6 plates; 80 figs; $2 (book).

Abstract in Zts. f. prakt. Geol., Jan.-Feb.,1912; pp. 1-85*; 75c.

Shaw, S. F.—*Some Notes on Porcupine;* [Geology and ores of various properties].—E. & M. J., Dec.23,1911, p. 1223; 3500 w*; 25c.

Sharwood, W. J.—*Analyses of Some Rocks and Minerals from the Homestake Mine, Lead, S. Dak.*—Econ. Geol'y, Dec., 1911, p. 729-989*; 65c.

Stines, N. C.—*Geology of High Grade District, Cal.*—Mng. Investor, May6,1912; p. 192; 1600 w; 25c.

Suchy, G.—*Die Erzlagerstätte von Altenberg in Schlesien nebst einer Uebersicht über das Bober-Katzbach-Gebirge;* [The ore deposits (gold-silver in pyrite veins cutting kersantyte) of Altenberg, Silesia, and a review of the Bober-Katzbach range].—Kohle & Erz, May13,1912; p. 506; May 20, p. 530; 6000 w*; 50c.

Umpleby, Jos. B.—*Geology and Ore Deposits of the Myers' Creek and Oroville-Nighthawk Mining Districts.*—Washington (State) Geol. Surv., Bull. 5, 1911; 111 pp.*; 50c.

———. *Geology of the Witwatersrand;* [Discussion of J. S. Olver's work].—S. Afr. Mng. Jnl., Dec.16,1911, p. 520, p. 528; Dec. 23, p. 560; 3000 w; 35c.

———. *Rand Geology;* [Reviews Mellor's and Horwood's discussion on stratigraphy and petrology of central Rand].—S. Afr. Mng. Jnl., March30,1912; p. 145; 1500 w; 35c.

———. *The Geological Problem of the West Rand.*—S. Afr. Mng. Jnl., Nov.25,1911, p. 403; 1000 w*; 35c.

———. *The Geology of the Witwatersrand;* [Reviews recent controversial questions].—S. Afr. Mng. Jnl., Dec.2,1911, p. 441; 2000 w*; 35c.

CARBONS AND HYDROCARBONS

See also under "Coal," "Petroleum" and "Natural Gas," Chapter 6; Diamonds, Asphalts, Chapter 7.

Arnold, R.—*A Petroleum Gas Volcano;* [Upheaval of island near Trinidad oil fields].—Petroleum World, March1912; p. 129; 1000 w*; 35c.

German abstract in Organ d. Bohrtechniker, May1, p. 106; 500 w; 35c.

Böckh, H. von.—*Ueber die Erdgaseruption bei Kissarmas;* [The natural gas eruption at Kissarmas, Oct. 29, 1911].—Organ d . . . Bohrtechniker, Jan.15,1912; p. 13; 5000 w*; 45c.

Breger, Carpel.—*The Various Theories of Petroleum Origin.*—Mining & Engg. World, Dec.16,1911, p. 1219; Dec.30, p. 1321; Jan. 13, p. —; 10,000 w; 30c.

Coste, Eug.—*Fallacies in the Theory of Organic Origin of Petroleums.*—Instn. of Mng. & Met'l'gy, Bull. 85, Oct.,1911, pp. 1-18; 17,000 w; 50c. Discussion, Bull. 86, Nov., pp. 15-42; Bull. 87, Dec., pp. 3-31; $1.00. Reply to discussion; Bull. 93, June, 1912; pp. 59-81; 50c.

Also discussed in Mng. Mag., Nov., p. 343; 100 w; 35c. Abstract of paper in S. Afr. Mng. Jnl., Nov.4,1911, p. 296; 1500 w; 35c. Also in Mng. Sci., Nov. 30, p. 493; Dec.7, p. 515; Dec.14, p. 535; 8000 w; 40c. Also in E. & M. J., Dec. 16, p 1192; 1200 w; 25c.

Czakó, E.—*Ursprung, Vorkommen und Verwendung der Naturgase;* [Origin, occurrence and use of natural gas; read to Karlsruher Chemische Ges; brief abstract].—Chemiker Ztg., Apr.11,1912; p. 403; 250 w; 25c.

Derby, O. A.—*Speculations on the Genesis of the Diamond;* [Abstract from Jnl. of Geol'y, 1911].—Mining & Engg. World, Apr.13,1912; p. 821; 2000 w; 10c.

Donath, Ed.—*Was ist Steinkohle?* [What is coal? Its distinction from lignite].—Montanist. Rundschau, Jan.16,1912; p. 53; 3800 w; 45c. Also in Oestr. Zts. f. Berg- & H-wesen, Feb.10, p. 71; Feb.17, p. 91; 3800 w; 75c.

Engler, C. and E. Severin.—*Katalyse und Erdölbildung;* [Catalysis and the genesis of petroleum].—Zts. f. angew. Chemie, Jan.26, 1912; p. 153; 3600 w; 40c.

Engler, C.—*Das Bitumen;* [Bitumens, their composition, nature and origin].—Chemiker Ztg., Jan.18,1912; p. 65; Jan.23, p. 82; 6000 w; 35c.

Engler, C.—*Die Bildung der Hauptbestandteile des Erdöls;* [Genesis of the principal components of petroleums].—Petroleum, Jan.17,1912; p. 399; 4000 w; 45c.

Engler, C.—*Die Bildung von Kohle und Erdöle;* [The formation of coal and oil and the energies contained therein.—Organ d. Bohrtechniker, Dec.1,1911, p. 280; 1600 w; 45c.

Frech, Fr.—*Deutschlands Steinkohlenfelder und Steinkohlenvorräte;* [Coal fields and estimated visible coal supplies of Germany].—Stuttgart; 1912; 165 pp.; 25 figs.; $5 (book).

Abstract in English in Engrng., Apr.5, p. 462; 3000 w; 30c.

Gény, P.—*Etude sur la distribution des teneurs en matières volatiles dans les veines de la concession de Courrières;* [Distribution of the volatile content of coal in various parts of the Courrières mines, Montigny; from Soc. Geol. du Nord, Annales, 1911, No. 2].—Rev. Noire, Aug.20,1911, p. 312; 1500 w*; 35c. Also in Soc. Amicale d . . . Mineurs de Douai, Bull.; Dec.25,1911; p. 816; 1500 w; 35c.

Glöckner, —. *Zur Entstehung der Braunkohlenlagerstätten der südlichen Lausitz;* [Geology and genesis of the lignite deposits of south Lausitz].—Braunkohle, Jan. 19, pp. 661-668; Jan.26, pp. 677-685*; Feb. 2, pp. 693-703*; Feb.9, pp. 709-712; $1.

Harger, H. S.—*The Bloemhof and Mooifontein Diggings.*—S. Afr. Mng. Jnl., Nov. 18,1911, p. 363; Nov.25, p. 401; Dec.2, p. 440; 4200 w; 65c.

Hille, F.—*Petroleum;* [Opposes organic theories of origin].—Canadian Mng. Jnl., March1,1912; p. 145; 2700 w; 25c.

von Höfer, H.—*Der Gasausbruch bei Kissármás und die Argille Scagliose;* [The natural-gas eruption at Kissarmas, and history of ancient gas eruptions in Italy and elsewhere in Europe].—Organ d. Bohrtechniker, Feb.1,1912; p. 25; 750 w; 45c.

Ipatjew, W.—*Der Ursprung des Erdöls;* [Genesis of petroleum; various theories; read to Russ. Physik-Chemisch. Ges.; German abstract].—Organ d. Bohrtechniker, June1,1912; p. 129; 1000 w; 45c.

Johnson, R. H.—*Additional Factors in the Origin and Accumulation of Oil;* [Reviews factors neglected by Campbell].—Econ. Geol'y, Dec.,1911, p. 808-812; 65c.

Klein, W. C.—*De Bruinkoolformatie in Limburg;* [The lignite formation in Limbourg; read to 13th general congress of Dutch naturalists at Groningen, 1911].—Groningen, 1912; 22 pp.; $1.

von Klebelsberg, R.—*Ein Beitrag zur Kenntnis des Sinai Carbons;* [The Carbon-

iferous formations of Sinai, Egypt].—Deu. Geol. Ver., Zts.; No. 12, 1911; pp. 594-603; $2.

Köhne, —. *Die geologischen Verhältnisse im rechtsrheinisch-westfälischen Steinkohlenbezirk;* [Geology of the Right Rhine-Westphalian coal field].—Mittingn. aus Markscheidw., 1912, No. 2; pp. 93-103*; $1.50.

Martin, G. C. and F. J. Katz.—*Geology and Coal Fields of the Lower Matanuska Valley, Alaska.*—U. S. Geol. Survey, Bull. 500; 1912; 98 pp*; 10c. Abstract in M. & S. P., April6,1912; p. 499; 2000 w; 20c.

Moore, J. H.—*The Use of Geology to the Mining Engineer;* [Especially in coal fields].—Sci. & Art of Mng., June8,1912; p. 521; 1100 w; 35c.

Munn, M. J.—*The Campton Oil Pool; and Oil and Gas Developments in Knox County, Kentucky.*—U. S. Geol. Survey, Bull. 471-A; 1911; pp. 5-13*; 14-25*; 10c.

Munn, M. J.—*The Payette Gas Field, Ala.*—U. S. Geol. Survey, Bull. 470-A; 1911; pp. 26-51*; 10c.

Noth, J.—*Das Erdöl- und Erdwachsvorkommen von Boryslav-Tustanovicz in Galizien und die Ursachen der Verwässerung, etc.;* [The oil and mineral wax occurrences in, and cause of the flooding of, the Boryslav-Tustanovicz oil field, Galicia; read to Geol. Ges. Wien.; abstract].—Organ d. . . Bohrtechniker, March1,1912, p. 49; 4000 w*; 45c.

Potonié, —. *Die Tropen Sumpfflachmoor-Natur der Moore des produktiven Karbons;* [The tropical marsh character of the bogs of the productive Coal Measures].—Kgl. Preuss. Geol. L-A., Jahrb., Vol. 30, Part 1, Heft 3; pp. 389-443*.

Power, F. D.—*Coalfields and Collieries of Australia.*—Melbourne, 1912; 412 pp*; $7 (book).

Preiswerk, H.—*Ueber den geologischen Bau der Region der Schlammvulkane und Oelfelder von Berca und Beciu bei Buzen in Rumänien;* [Geology of the region of mud volcanoes and the oil fields of Berca and Beciu near Buzen, Roumania].—Zts. f. prakt. Geol., Jan-Feb.,1912; pp. 86-95*; 75c. Abstract (in German) in Petroleum, Apr.3, p. 729; 750 w; 50c.

Raefler, F.—*Die Entstehung der Braunkohlenlager zwischen Altenburg und Weissenfels;* [Geology and genesis of the lignite beds between Altenburg and Weissenfels].—Jena Inaug. Dissert., 1911; 58 pp.; $1; (Thesis).

Reprinted in issues of Braunkohle in March, April, May and June, 1912.

Rogers, A. W.—*Coal Problem in the Karroo;* [Fissure-vein deposits of coal in Nieuweveld region; abstract from report of Cape Geol. Commission].—S. Afr. Mng. Jnl., March16,1912; p. 51; 1500 w; 35c.

Shimer, H. W.—*Geology of the Rhine Valley.*—Science Conspectus, March,1912; p. 108; 2500 w; 65c.

Sim, J.—*The Geology of Coal;* [Theories of origin; read to Scottish Federated Inst. of Mng. Students, Western branch].—Iron & Coal Trades Rev., March8,1912; p. 365; 5200 w; 30c.

Simpson, C.—*Causes of Washouts or Barren Areas in Coal Seams.*—Sci. & Art of Mng., Jan.20,1912; p. 279; 500 w; 35c.

Smith, W. D.—*The Coal Resources of the Philippine Islands.*—Mineral Resources of Philippines, 1911, p. 37-56*; 65c.

Stone, R. W.—*Coal Near the Black Hills, Wyoming-S. Dak.*—U. S. Geol. Survey, Bull. 499; 66 pp*; 10c.

Ubbelohde, L. and S. Woronin.—*Ueber die Einwirkung von Katalysatoren auf Erdöl;* [Effect of catalyzing agents on petroleum; contribution to the origin of petroleum].—Petroleum, Oct.4,1911, p. 9; 3200 w; Jan.3, 1912, p. 334; Jan. 17, p. —; 5000 w*; 95c.

Udden, J. A.—*Oil and Gas Fields of Wichita and Clay Counties.*—See Texas.

Udden, J. A.—*Geology and Mineral Resources of the Peoria Quadrangle, Illinois;* [Chiefly coal and brick and tile].—U. S. Geol. Surv., Bull. 506; 1912; 101 pp*; 10c.

Wegemann, C. H.—*The Powder River Oil Field, Wyoming.*—U. S. Geol. Survey, Bull. 471-A; 1911; pp. 52-71*; 10c.

Woodruff, E. G.—*Geology of the San Juan Oil Field, Utah.*—U. S. Geol. Survey, Bull. 471-A; 1911; pp. 72-100*; 10c.

Zuber, R.—*Die Oel- und Wasserhorizonte von Boryslav-Tustanovicz;* [The oil and water horizons of the Boryslav-Tustanovicz oilfield, Galicia].—Petroleum, Feb.7,1912; p. 457; 3500 w*; 45c.

———. *Detailed County Report on Wirt, Roane and Calhoun Counties.*—W. Va. Geol. Survey, 1911; pp. 573; 3 maps; $2.00; (book).

———. *Modern Views on the Constitution of Coal.*—Coll'y Guardn., Dec.15,1911, p. 1191; 1500 w; 35c.

———. *Progress in Kentucky Geology;* [Coal fields].—Mines & Minerals, June, 1912; p. 649; 1500 w; 35c.

SILVER-LEAD-ZINC AND SULPHIDES

See also Copper, Chapter 3; Lead, Silver and Zinc, Chapter 5; Pyrite, Chapter 7.

Allen, E. T.—*Sulphides of Iron and Their Genesis;* [Studies at Carnegie Inst. Geophysical Laboratory].—M. & S. P., Sept.30, 1911; p. 413; 3000 w; 20c. Abstract in Chem. Met. & Mng. Soc. of S. Africa, Jan. 1912; p. 287; 2100 w; 90c.

Allen, E. T. and others.—*Mineral Sulphides of Iron;* [Genesis in nature and artificially].—Amer. Jnl. of Sci., March.1912; pp. 169-230*; 65c. Abstract in Mining & Engg. World, Apr.20, p. 857; 4800 w; 10c.

Bain, H. F.—*Flats and Pitches of the Wisconsin Lead and Zinc District.*—"Types of Ore Deposits," by H. F. Bain and others; 1911; pp. 77-102*.

Birkeland, Kr.—*Der Ursprung des Silbers zu Kongsberg;* [Genesis of the silver sulfide ores at Kongsberg, Norway; read to Kristiania Videnskaps Selskap, Nov.24, 1911; brief abstract in] Chemiker Ztg., Jan. 18,1912; p. 70; 500 w; 35c.

Braecke.—*La région minière de Linarès-La Carolina;* [The lead mining region of Linares-Carolina, Spain].—Rev. Univ. d. Mines, March,1912; pp. 243-262*; $1.

Abstract in Spanish in Rev. Minera, May 1.1912; p. 206; May24, p. 245; Junel, p. 261; 5000 w; 65c.

Buckley, E. R.—*Lead and Zinc Deposits of the Ozark Region;* [Southeast and central Missouri, Joplin district, and Missouri-Arkansas].—"Types of Ore Deposits," by H. F. Bain and others; 1911; pp. 103-132*.

Doss, B.—*Ueber die Entstehung der ökonomisch wichtigsten Schwefelkieslagerstätten;* [Origin of the world's important pyrite deposits; with notes on bacterium origin of melnikowite, a new Russian pyrite mineral; read to Versammlung Baltischer Naturforscher; Riga, Apr., 1912; brief abstract in].—Chemiker Ztg., May14,1912; p. 540; 300 w; 35c.

Emmons, S. F.—*Cobalt District, Ontario.*—"Types of Ore Deposits," by H. F. Bain and others, 1911; pp. 140-156*.

Reprinted from Mng. & Sc. Press, March 18, 1911; [An address read to Geol. Soc. of Washington, Jan.26,1910].

Hershey, O. H.—*Genesis of Lead-Silver Ores in Wardner District, Idaho.*—M. & S. P., June1,1912; p. 750; June8, p. 786; June 15, p. 825; 11,000 w*; 40c.

Hore, R. E.—*The Silver Fields of Nipissing.*—Canadian Mng. Inst., Bull. 17; Dec., 1911; pp. 81-106* $1.20.

Knight, C. W.—*Recent Underground Work at Cobalt;* [Geology of silver deposits].—Canadian Mng. Inst., Bull. 18, Feb., 1912; p. 21; 2200 w*; $1.20.

Knight, C. W.—*Geology of the Cobalt District, Ontario;* [Critical notes on Hore's earlier paper].—Amer. Inst. Mng. Engrs., Bull. 60, Dec.,1911, p. 1035; 1000 w; $1.15.

Locke, Aug.—*Geology of the Tonopah Mining District.*—Amer. Inst. Mng. Engrs., Trans. for October,1911; 3000 w*; $1.15.

Abstract in M. & S. P., Oct.21,1911, p. 523; 2500 w*; 20c. Also in Mining & Engg. World, Dec.23, p. 1271; 1700 w*; 10c. Also in Mng. Sci., March28, p. 286; 2800*; 20c.

Lord, P. B., and Y. S. Bonillas.—*Algunos criaderos argentiferos de cerca de Reyes, Durango;* [The silver ore deposits of the Bonanza Mng. Co. mines and vicinity, Reyes, Durango].—Soc. Geol. Mex., Bol.; Vol. 7, No. 2; p. 149; 1200 w*; $2.

Mace, C. R.—*Genesis of Leona Heights Ore Deposit, Cal.;* [Cupriferous pyrite near Oakland].—Mining & Engg. World, Dec.30, 1911, p. 1320; 1500 w; 10c.

Matteson, W. G.—*Minerals, Geologic Structure and Genesis of Silver Deposits* [World's principal silver districts].—Mines & Minerals, Jan.,1912, p. 358; Feb., p. 438; March, p. 504; 8500 w*; tables; 95c.

Ralston, O. C.—*Leadville, Colo., Fissure Veins.*—Mines & Minerals, Apr.,1912; p. 549; 1000 w; 35c.

Sidenvall, K.—*Om Oberschlesiens geologi och malmbrytning;* [Geology and ore deposits of Upper Silesia; coal, lead-zinc].—Jernkontor. Annaler, Bihang; Dec.,1911; pp. 971-978*; 45c.

Winchell, H. V., and A. N.—*Notes on the Blue Bird Mine;* [Geology of silver ores accompanied by tourmaline; Wickes, Montana].—Econ. Geol'y, April-May,1912; p. 287-294*; 65c.

Wilson, J. B.—*A Broken Hill Problem: What Has Become of the Zinc;* [Discusses economic and geologic significance of deficiency of zinc in Broken Hill, N. S. W., oxidized zone].—Australian Mng. Standd., Dec.7,1911; p. 565; 2000 w*; 35c.

GEOLOGY-GENESIS OF PLACER DEPOSITS

See also under Gold, Chapter 4; Tin, Chapter 5; also Dredging and Hydraulicking, Chapter 8.

Capilla, A.—*Deposito de antiguos aluviones argentiferos en el rio de Santiago, Jalisco;* [Some silver placer deposits, Santiago river, Jalisco].—Soc. Geol. Mex., Bol.; Vol. 7, No. 2, p. 135-139; 2000 w; $2.

Coghill, W. H.—*Solution of Placer Gold and Silver* [and amounts present in sea water].—M. & S. P., Jan.20,1912; p. 141; 1500 w; 20c.

Ferguson, H. G., and A. M. Bateman.—*Geologic Features of Tin Deposits;* [Geology of world's deposits].—Econ. Geol'y, April-May,1912; p. 209-262*; 65c.

Redepenning, —. *Beiträge zur Kenntnis einiger wichtiger Goldvorkommen in Amerika;* [Some of the more important gold deposits of America; Alaska (Nome, Fairbanks placers, Unga and Douglas I'ds. lodes), French Guiana dredging].—Zts. f. d. Berg-, H-, & Salinenwesen, Vol. 59, No. 5, 1911; pp. 695-707; $1.15.

Scrivenor, J. B.—*The Geology and Mining Industries of Ulu Pahang.*—London, 1912; pp. —*; $2.50; (book).

Singewald, J. T.—*Some Genetic Relations of Tin Deposits;* [Various types of deposits and genesis].—Econ. Geol'y, April-May, 1912; p. 263-279; 65c.

Tyrrell, J. B.—*The Law of the Pay-Sand in Placer Deposits;* [Especially in Klondike district].—Instn. of Mng. & Met'l'gy, Bull. 92; May,1912; pp. 13*; 50c. (Discussion), Bull. 93, June, pp. 3-12; 50c.

Abstract in M. & S. P., June1, p. 760; 3800 w*; 20c. Also in Canadian Mng. Jnl., June1, p. 362; 5000 w*; 25c. Also in Mining & Engg. World, June8, p. 1195; 4000 w*; 10c. Also in Mng. Sci., June13, p. 508; 4000 w*; 20c. Also in Mines & Methods, June, p. 512; 4500 w*; 20c.

IRON; COPPER; MISCELLANEOUS

See also Copper, Chapter 3; Iron, Chapter 4; etc.

Beck, K.—*Petrographisch-geologische Untersuchung des Salzgebirges im Werra-Fulda-Gebiete der deutschen Kalisalzlagerstätten* [Petrographic-geologic researches in the saline formations in the Werra-Fulda district of the German potash field].—Zts. f. prakt. Geol., Apr.,1912; p. 133-159*; $1.25. Also in abstract, in Kali, June1, p. 262; 1800 w; 45c.

Bonillas, Y. S.—*Reconocimiento de algunos criaderos de fierro del Estado de Oaxaca;* [Geologic reconnaissance of some iron-ore deposits in western Oaxaca, Mex.—Inst. Geol. Mex., Parergones, Vol. 3, No. 9; 1911; pp. 501-544*; $1.

Cayeux, L.—*Existence de restes organiques dans les roches ferrugineuses associées aux minérais de fer Huroniens des Etats Unis;* [Existence of echinoderms and other fossils in the Huronian iron-bearing formations in the U. S.].—Acad. d. Sci., Paris, C-R; Vol. 153, 1911; pp. 910-912; $1.

Chance, H. M.—*Geology in Coal Mining.*—Coal Age, Dec.23,1911, p. 353; 1800 w; 20c.

Duparc, L.—*Le platine et les gites platinifères de l'Oural;* [Platinum and the platinum deposits of the Urals].—Archives d. Sci. Physiq. & Naturelles (Geneva), Vol. 31; March-June,1911; 80 pp*; $2.

Brief review in Econ. Geol'y, Feb.,-March, 1912; p. 202; 750 w; 65c.

Dussert, M.—*Etude sur les gisements de fer de l'Algérie;* [Monograph on the iron ore deposits of Algeria].—Annales d. Mines Paris), Feb.,1912; pp. 69-134*; March, pp. 135-256*; $1.20.

Abstract (in French) in Soc. Amicale Ecole Douai, Bull., May10, p. 279-382; 600 w; 35c.

Italian abstract in Rassegna Mineraria, May11, p. 265; May21, p. —; 5000 w; 50c.

Du Toit, A. L.—*The Copper-Nickel Deposits of the Insizwa, East Griqualand;* [Abstract from report to Cape Geol. Commission].—S. Afr. Mng. Jnl., March9,1912; p. 19; 2000 w; 35c.

Eckel, E. C.—*Building Stones and Clays, Their Origin, Characters and Examination.*—N. Y., 1912; pp. xiv, 264; 37 figs; $3 (book).

Fermor, L. L.—*On the Origin of the Iron Ores of Swedish Lapland.*—Iron & Steel Inst., Jnl.; Oct.,1911; 12 pp.; 50c.

Reprint in Iron & Coal Trades Rev., Oct. 6, p. 530; 3500 w; 30c. Abstract in German in Bergbau, Nov. 23, p. 748; 3000 w; 35c. In Italian in Rassegna Mineraria, Dec.21, p. 289; 2500 w; 35c.

Ginestous, G.—*Esquisse géologique de la Tunisie;* [Geology and mining industry of Tunis].—Paris, 1912; 164 pp*; $2 (book).

Glenn, L. C.—*The Growth of Our Knowledge of Tennessee Geology.*—"Resources of Tennessee," May,1912; pp. 167-219*; 50c.

Grabigg, B.—*Ueber die Ausführung geologischer Beobachtungen in Gruben und deren bildliche Darstellung: Plattenförmige Lagerstätten;* [Refinement in methods of geologic examination and illustration of mines and ore bodies: Laminar ore bodies (veins, beds and bedded veins)].—Oestr. Zts. f. Berg- & H-wesen, Jan.13,1912; p. 15; 4000 w*; 45c.

Guardiola, R.—*Sobre el origin de los criaderos de Mayari;* [Genesis of the iron ores of Mayari, Cuba].—Rev. Minera, Jan. 16,1912; p. 25; March1, p. 103; 4500 w; 50c.

Hahn, F. F.—*The Form of Salt Deposits.*—Econ. Geol'y, Feb.-March,1912; pp. 120-135*; 65c.

Holtz, H. C.—*La composition des principaux minerais de platine de l'Oural;* [Composition of the chief platinum ores of the Urals].—Univ. of Geneva Dissertation; 1911; 66 pp; (thesis).

Hore, R. E.—*The Copper Mining Industry of Michigan;* [Abstract of monograph of Michigan Geol. Survey].—Mining & Engg. World, March16,1912; p. 601; March23, p. 656; March30, p. 707; 11,000 w*; 30c.

Hoyer, —. *Beiträge zur Kenntnis der Manganerzlagerstätten in der spanischen Provinz Huelva;* [The manganese ore deposits of Huelva, Spain].—Zts. f. prakt. Geol., Dec.,1911, pp. 407-432*; 75c.

Hynes, D. P.—*Geology of the Mina Mexico Mines;* [Argentiferous copper, Sahuaripa district, Sonora].—Econ. Geol'y, April-May, 1912; p. 280-286*; 65c.

Kemp, J. F.—*Geological Problems Presented by the Catskill Aqueduct of the City of New York.*—Canadian Mng. Inst., Jnl., No. 16, Oct.,1911, pp. 3-11; $1.20.

Kemp, J. F.—*Comparative Sketch of the Pre-Cambric Geology of Sweden and New York.*—N. Y. State Mus., Bull. 149, 1911; pp. 93-106; 75c.

Kindelan, V.—*Mas sobre la formacion de los criaderos de hierro de Mayari;* [Genesis of the Mayari iron ore deposits, Cuba].—Rev. Minera, Feb.24,1912, p. 94; 1200 w; 35c.

Larsen, E. S.—*Alunite in the San Cristoba Quadrangle, Colo.*—U. S. Geol. Survey, Bull. 530-F; 1912; 7 pp.*; 20c.

Leith, C. K.—*The Lake Superior Type of Iron-Ore Deposits.*—"Types of Ore Deposits," by H. F. Bain and others; 1911; pp. 53-76.

Leith, C. K.—*Las Minas de Mayari;* [The iron ores and mines of Mayari, Cuba].—Ingeniería (Madrid), Nov.30,1911, p. 392; 4500 w; 45c.

Martin, G. C. and F. J. Katz.—*A Geologic Reconnaissance of the Iliamna Region, Alaska.*—U. S. Geol. Surv., Bull. 485; 1912; 138 pp.*; 10c.

Mead, W. J.—*Some Geological Short Cuts;* [Slide-rule and chart devices for conversion of rock analyses into terms of minerals].—Econ. Geol'y, Feb.-March,1912; pp. 136-144*; 65c.

Müller, H. E.—*Der Quecksilberbergbau in Toskana;* [Geology and mining of the quicksilver deposits of Tuscany].—Glückauf, Feb.10,1912; p. 218-229*; 50c.

Naumann, M.—*Zur Kenntnis der Salzlagerstätte von Glückauf-Sondershausen;* [The Glückauf-Sondershausen potash deposit, S. Hartz district].—Kali, March1, 1912; p. 101; 2000 w*; 45c.

Newland, D. H.—*Notes on the Geology of the Swedish Magnetites.*—N. Y. State Mus. Bull. 149; 1911; pp. 107-119; 75c.

Pawlowski, A.—*Une Normandie Inconnue; le Bassin Minier de la Basse-Normandie;* [The iron-mining and smelting industry in Basse, Normandy, France].—Paris, 1911; pp. —; $1.00; (book).

Piña de Rubies, S.—*Composition of the Platiniferous Dunite of the Urals* [in Spanish; read to Soc. Española de Fisica y Química; brief abstract in German in] Chemiker Ztg., Jan.4,1912; p. 17; 100 w; 35c. Also in Mining & Engg. World, March 9, p. 550; 250 w; 10c. (In English.)

Ransome, F. L.—*The Turquoise Copper-Mining District, Arizona.*—U. S. Geol. Surv., Bull. 530-C; 1912; 12 pp*; 10c.
Abstract in Mining & Engg. World, June 29, p. 1359; 2400 w*; 10c.

Reidemeister, C.—*Ueber Salztone und Plattendolomite im Bereiche der norddeutschen Kalisalzlagerstätten;* [Saline clays and dolomitic flagstones in the north German potash formations].—Kali, May15, 1912; p. 226; June15; p. 295; 7000 w*; 65c.

Rogers, A. F.—*Orthoclase-Bearing Veins from Rawhide, Nev., and Weehawken, N. J.*—Econ. Geol'y, Dec.,1911; p. 790-798*; 65c.

Rogers, A. F.—*On Corundum-Syenite (Uralose) from Montana.*—Jnl. of Geol'y, Nov.-Dec., 1911; p. 748-751; 65c.

Schultz, A. R. and W. Cross.—*Potash-Bearing Rocks of the Leucite Hills, Sweetwater County, Wyoming.*—U. S. Geol. Survey, Bull. 512; 39 pp*; 10c.
Abstract in Amer. Fertilizer, March23, 1912; p. 39-47*; 25c.

Schrader, F. C.—*A Reconnaissance of the Jarbidge, Contact and Elk Mountain Mining Districts.*—See under Nevada.

Singewald, J. T.—*Genesis of Certain Devonian Ores;* [Iron ores of Lahn-Dill region, Nassau, interbedded with diabases].—Econ. Geol'y, Feb.-March,1912; p. 191; 1500 w; 65c.

Smyth, C. H.—*The Clinton Type of Iron-Ore Deposits.*—"Types of Ore Deposits," by H. F. Bain and others; 1911; pp. 33-52.

Soper, E. K.—*The Geology and Mining of Clay.*—E. & M. J., Feb.3,1912; p. 263; 6500 w; 25c.

Stahl, A. F.—*Geologie von Persien;* [Manuals of Regional Geology; Vol. V: Geology of Persia].—Heidelberg, 1912; 46 pp*; $1 (book).

Step, J. and F. Dautwitz.—*St. Joachimsthal;* [St. Joachim's Valley, Bohemia, and its uranium and radium industry].—Vienna, 1911; 107 pp*; $1 (book).

Stewart, C. A.—*Geology in the Examination of Prospects.*—M. & S. P., May4,1912; p. 622; 2500 w; 20c.

Stewart, C. A.—*Geology and Ore Deposits of the Silverbell Mining District, Ariz.*—Amer. Inst. Mng. Engrs., Trans.; Feb., 1912; 51 pp*; $1.15.
Abstract in Mining & Engg. World, May 25, p. 1104; June1, p. 1147; 7000 w*; 20c.

Stromer, —. *Ueber Alttertiär in Westafrika und die Südatlantis;* [The older Tertiary in West Afrika and the south "Atlantis" province].—Kgl. preuss. Geol. L-A.,

Jahrb., Vol.30, Pt. 1, No. 3; pp. 511-515.

Sundt, Lorenzo.—*El orijen del Salitre en Chile;* [Origin of the sodium nitrate and saline deposits of Chile].—Soc. Nac. Mineria (Chile), Bol; Feb.,1912; 3 pp; $1.15.

Tovote, W. L.—*Types of Porphyry Copper Deposits;* [Discusses geology and genesis of types of low-grade copper deposits in Utah, Arizona, Braden (Chile) and Nacozari (Sonora)].—M. & S. P., May18,1912; p. 686; 3000 w*; 20c.

Toula, Fr.—*Die jungtertiäre Fauna von Gatun am Panamakanal;* [The younger Tertiary fossil fauna from Gatun, Panama].—Oestr-Ungarn KK. Geol. Reichsanst., Jahrb., Vol. 61, No. 3 and 4; 1912; p. 487-530*; $2.

Toula, Fr.—*Nachträge zur jungtertiären (Pliocänen) Fauna von Tehuantepec;* [Supplementary notes on the Pliocene fauna of Tehuantepec].—The same, pp. 473-486*; $2.

Tschirvinsky, W.—*Zur Frage über die mineralogische Natur der russischen Phosphorite;* [Problem of inorganic origin of the Russion phosphate deposits].—N. Jahrb. f. Mineralog., etc., 1911, Vol. 2; pp. 51-75*; $1.

Warren, C. H.—*The Barite Deposits of Five Islands, N. Scotia.*—Econ. Geol'y, Dec., 1911; pp. 799-807*; 65c.

Watson, T. L., and F. L. Hess.—*Zirconiferous Sandstone near Ashland, Va.*—U. S. Geol. Surv., Bull. 530, Part 1; 9 pp; 10c.

Weed, W. H.—*Brief Notes on the Geology of the Ely District, Nevada.*—Mining & Engg. World, June8,1912; p. 1198; 750w; 10c.

Weed, W. H.—*Notes on the Miami Copper District, Arizona;* [Ore deposits and geology].—Mining & Engg. World, May18, 1912; p. 1043; 2200 w; 10c.

Weed, W. H.—*Is Geology a Success as a Guide to Ore Deposits?*—Mining & Engg. World, June 1,1912; p. 1138; June 8, p. —; 2500 w; 20c.

Weed, W. H.—*A Plea for Rational Classification of Ore Deposits.*—Mining & Engg. World, May25,1912; p. 1088; 1400 w; 10c.

Weed, W. H.—*Literature of Ore Deposits in* 1911.—M. & S. P., Jan.6,1911, p. 35; 2000 w; 35c.

Wegscheider, R.—*Die Natriumcarbonate in der Natur;* [Sodium carbonate occurrences in nature; read to Ver. Oesterr. Chemiker, Dec. 2, 1911; brief abstract].—Chemiker Ztg., Jan.25,1912; p. 97; 500 w; 35c.

Winchell, N. H.—*A Diamond Drill Core Section of the Mesabi Rocks, IV;* [Petrography and genesis of Mesabi iron ores].—Lake Superior Mng. Inst., Proc., 1911; pp. 61-69. Reprint in Mining & Engg. World, Aug.26,1911, p. 377; 3000 w; 10c.

Wunstorf, W. and G. Fliegel.—*Die Zechsteinsalze des niederrheinischen Tieflandes;* [The Permian (Zechstein) salt and potash beds of the lower Rhine region].—Glückauf, Jan.20,1912; pp. 89-96*; 50c.

———. *Contribute alla bibliografia degli studi sui giacimenti ferriferi italiani;* [Bibliography of the iron ore deposits of Italy].—Met'l'gia Ital., Nov.,1911, p. 745-748; 45c.

———. *Geological Surveys and Mining Geology; Are They a Success?* [Cites failures of geologic bureaus to predict ore deposits subsequently located by others].—Mining & Engg. World, May18,1912; p. 1037; Junel, p. 1133; 2000 w; 20c.

———. *Value of An Efficient State Mining and Geological Bureau.*—Mining & Engg. World, Junel5,1912; p. 1233; 1000 w; 10c.

Law; Legislation; Taxation

See also Prospecting, in Chapter 8.

See also Workmen's Compensation under Labor, etc., in "Mine and Mining."

Aguillon, L.—*Régime légal des mines au Congo belge;* [Mining law and regulations in the Belgian Congo].—Annales d. Mines (Paris), Jan.,1912; pp. 5-28; 65c.

Aguillon, L.—*La législation minière de la Bulgarie;* [The mining law and legislation of Bulgaria].—Soc. de l'Ind. Minrl. St. Etienne, Bull., Oct.,1911, p. 337-348; $1.00.

Ajam, M.—*La nouvelle législation minière;* [New mining legislation in France].—Paris, 1911; 261 pp; $1.50 (book).

Beard, J. T.—*The Election of Mine Inspectors.*—Coal Age, Apr.20,1912; p. 903; 3600 w; 20c.

Bitta, —. *Zum neuen Entwurf eines preussischen Wassergesetzes;* [The newly proposed Prussian law on water rights].—Stahl & Eisen, Jan.18,1912; p. 89-95; 75c.

Blauhorn, Jos.—*Das Recht der Rohölgewinnung in Oesterreich, II;* [The Laws Covering Petroleum Industry in Austria; Vol. II: Regulations of the Mines Inspection Corps].—Vienna-Berlin; 1911; pp. —; $1.00 (book).

Bougault, P.—*La législation des chutes d'eau;* [Laws governing use of water power in France].—Grenoble, France; 1911; 350 pp.; $2.50 (book).

Deutsch, Dr.—*Die wirtschaftlich-politische Bedeutung des Gesetzes über den Absatz von Kalisalzen;* [Industrio-political significance of the German potash law].—Kali, Jan.1,1912; p. 5-17; Jan.15, p. 33-42, Feb. 1, p. 66-71; Feb.15, p. 88-95; March1, p. 107-112; $1.70.

Eder, P. J.—*The Mining Laws of the Republic of Colombia. Translated, with an Introduction and Notes.*—Washington, D. C., 1912; 150 pp.; $2 (book).

Fallières, A. (President of France).—*Nouveau Règlement Général sur l'Exploitation des Mines de Combustibles en France;* [Text of new law governing coal mining in France].—Journal Officiel, Aug.26,1911; 18,000 w.

Reprint in Echo d. Mines, Aug. 31, (Supplement); 18,000 w; 35c. Also in Soc. Amicale d...Mineurs de Douai, Bull., Sept.25, pp. 514-622; Oct.10, p. 649-; Oct.25, p. 691-; 65c. Also in Rev. Noire, Sept.17, Oct.1, Oct.15, Oct.29; 90c. Also in Soc. d l'Ind. Minrl. St. Etienne, Bull., Oct.,1911, pp. 367-410; 75c. Also in Annales d. Mines (Belgiq.), Vol. 16, No. 4,1911; $1.00.

Summary in English, and editorial discussion, in Coll'y Guardn., July26,1912, p. 173; p. 183; 5000 w; 35c. Also in Coal Trade Bull., Aug.15, p. 53; 3000 w; 25c.

Fegan, H. J.—*Memorandum in re Saline Claims, Potash Deposits, etc.;* [Manner of legal location in U. S.].—U. S., 62d Congr., 2d Session; Senate Doc. No. 190; 1912; pp. 126-128.

French, H.—*Congress Continues the Mints and Assay Offices;* [Reviews unsuccessful movement to close western and southern mint and assay offices].—Mining & Engg. World, June8,1912; p. 1193; 2500 w; 10c.

Frühe, H.—*Das Zinnerrecht von Cornwall;* [Historical development of the laws governing the tin industry in Cornwall].—Zts. f. Bergrecht, Vol. 53, No. 2, 1912; p. 165-222*; $1.

Görres, K., and K. Kormann.—*Das Reichskaligesetz;* [The German Potash

Law].—Charlottenburg, 1911; pp. — (book).

Kern, Dr.—*Die rechtlichen und wirtschaftlichen Verhältnisse im Steinkohlengebiet von Heraklea in Kleinasien;* [Coal mining in the Heraclea district, Asia Minor; its legal, technical and industrial aspects].—Berg- & Hüttenm. Rundschau, May5,1912; p. 163; 5500 w; 35c.

Köbrich.—*Die Eichung der Fördergefässe im Bergwerksbetriebe;* [The German law of April 1 controlling the measurement of weights in mine cars, cages, buckets, etc., as affecting wages].—Glückauf, May27, 1912; p. 667-677; 50c.

Lebrun, A.—*Nouvelle Réglementation minière de l'Indo-Chine;* [New mining code for French Indo-China; from Journal Officiel, Feb.8,1912].—Echo d. Mines, Feb.15, 1912, p. 194; 2100 w; 35c.

Liesegang, C.—*Das Bergrecht der deutschen Schutzgebiete;* [Principles of the mining law of German Africa and the German possessions].—Techn. Blätter, March 23,1912; p. 89; March30, p. 100; Apr.5, p 108; 10,000 w; 65c.

MacFarren, H. W.—*Birth of the American Mining Act;* [Early history and congressional debates on American mining laws].—M. & S. P., Apr.13,1912; p. 527; Apr.20, p. 564; Apr.27, p. 592; 16,000 w; 40c.

Merrill, F. J. H.—*Revision of the Mining Laws;* [Discusses chiefly alleged regalian rights of federal government to gold and silver mineral lands].—M. & S. P., June1,1912; p. 758; 2400 w; 20c.

Morrison, R. S.—*A Review of Mining Decisions in* 1911.—Mng. Sci., Jan.25,1912; p. 92; 2100 w; 25c.

Richardson, D. A.—*Conveyance of Mining Property in Mexico.*—Mining & Engg. World, May4,1912; p. 957; 2000 w; 10c.

Richardson, D. A.—*Origin and History of Mining Locations in Mexico.*—Mining & Engg. World, Feb.10,1912; p. 357; 2000 w; 10c.

Richardson, D. A.—*The Extent of Mining Titles under Mexican Law.*—Mining & Engg. World, March30,1912; p. 711; 3200 w; 10c.

Ricketts, A. H.—*A Manual of American Mining Law.*—San Francisco, 1911, pp. 486, xiv; $4.25; (book).

Ricketts, A. H.—*A Congressionally Created Frankenstein;* [Opposes granting Land Office power to construct and interpret the mineral-land laws without supervision of the courts].—Mng. & Oil Rev., May,1912; p. 10; 1800 w; 25c. Also in Mining & Engg. World, June8, p. 1201; 1800 w; 10c.

Ritter, K.—*Das koloniale Bergrecht;* [Mining law of the German colonies].—Nürnberg and Leipzig, 1911; pp. — (book).

Ropes, L. S.—*As to Prospecting;* [Reviews maladministration of Land Office, prospectors' rights on Forest Reserves, and filing on buried lodes].—E. & M. J., June1, 1912; p. 1069; 1800 w; 25c.

Schreiber, H.—*Die Wasserkraftausnutzung und das neue Wasserrecht;* [The new Austrian water laws and the development of water power; read to Elektrotechn. Ver., Jan., 1912].—Elektrotechnik & MaschBau, March3,1912; pp. 180-188; 9000 w; 35c.

Scott, W. A.—*Proposed Changes in the Lead Tariff.*—M. & S. P., Feb.10,1912, p. 247; 750 w; 20c.

Semple, C. S.—*Government Aid to Miners;* [Discusses state-aided custom mills and Western Australia system].—E. & M. J., Dec.23,1911, p. 1213; 1600 w; 25c.

Smith, G. O.—*The Mineral Land Laws and Their Defects;* [From annual report of Director of U. S. Geol. Survey].—M. & S. P., Jan.13,1912; 4400 w; 20c.

Stevenin, A.—*Codes Miniers: Espagne;* [Mining Codes of Various Nations; (Series by Comité central des Houillères de France); Spain].—Paris, 1911; 142 pp.; $4.00 (book).

Tallis, J. F.—*Coal Mines Act,* 1911 [British].—Newport, Engl.; 1912; pp. — (book).

Van Wagenen, F. T.—*The Prospector and the Mining Law;* [Discusses the necessity of encouraging the prospector, and extralateral rights].—M. & S. P., May18,1912; p. 688; 3000 w; 20c.

Winchell, H. V.—*A Discussion of Mining Law;* [Principles of concession vs. claims, leasing, etc.].—Canadian Mng. Inst., Trans., Vol. 15, No. 1; 1912; pp. 73-91; $1.15.

Abstract in E. & M. J., March9,1912; p. March9, p. 367; 7000 w; 20c. Also in Canadian Mng. Jnl., Apr.15, p. 266; 7000 w; 25c. Also in Engg. Mag., May, p. 255; 2500 w; 35c. Also in Mining & Engg. World, July27, p. 145; 4500 w; 10c. Also in Mines & Methods, July,1912; p. 521; 5000 w; 20c.

Zimmerman, —. *Die Kaliindustrie und das Reichskaligesetz;* [The German potash industry and potash law].—Technik & Wirtschaft, May,1912; pp. 341-347; 75c.

State Mining Dept.—*Mining Laws of the State of Montana, Compiled from the Revised Codes of* 1907, *and Sessions Laws of* 1909-1911.—Helena, Mont., 1911; 106 pp.; 50c.

Asso. Mineraria Sarda.—*Considerazioni e proposte sui disegno di legge sul lavoro nelle miniere;* [Suggestions on a proposed mine-labor code for Italy].—Rassegna Mineraria, March1,1912; p. 125; 4000 w; 35c.

———. *Canadian Coal Mining Laws;* [Summary of all known operative laws and regulations, dominion and provincial].—Coll'y Guardn., Apr.26,1912; p. 835; 2000 w; 35c.

———. *Commonwealth Iron Bounty.*—Australian Mng. Standd., Nov.23,1911; p. 516; 2400 w; 35c.

———. *East Tintic Claim Decision;* [General Land Office ruling requiring strict discovery of mineral of present or prospective value on mining claims].—E. & M. J. June15,1915; p. 1163; 3000 w; 25c.

———. *Mexiko; Berggesetz vom* 25. *November* 1909; [Text of the Mexican mining law of Nov.25,1909].—Zts. f. Bergrecht, Vol. 53, No. 1; 1912; pp. 54-83; $1.

———. *New Russian Mine Law;* [Brief abstract].—Mines & Minerals, March,1912; p. 450; 1000 w; 35c.

———. *Proyecto de ley de enganche minero;* [Proposed legislation governing miners' employment agencies in Peru].—Soc. d. Ingrs. (Peru), Bol; Feb.1912; p. 91-101; 75c.

———. *Regolamento sull'industria del petrolio;* [Regulations governing petroleum concessions and locations in Italy].—Rassegna Mineraria, May1,1912; p. 251; 1500 w; 35c.

———. *Reprint of Coal Mines Act* 1911 [British; 1 & 2, Geo. 5, Ch. 50].—Sci. & Art of Mng., Suppl., Jan.20,1912; pp. xv; 35c.

———. *Sunday Milling on the Rand.*—S. Afr. Mng. Jnl., Dec.9,1911; p. 477; 1100 w; 35c.

———. *The Underwood Metal Tariff*

Schedule.—Iron Age, Jan.25,1912; p. A-D (Supplement); 6500 w; 30c.

———. *U. S. A. Mining Law; Proposed Reforms;* [Apex law, title to oil and gas lands, area of coal claims].—Mng. Jnl., Feb. 3,1912; p. 105; 1200 w; 35c.

———. *Yukon Mining Legislation;* [Act labor performance].—Canadian Mng. Jnl., May15,1912; p. 331; 1200 w; 25c.

TAXATION

Blümel, —. *Zur Frage der Abschreibungen wegen Substanzverminderung;* [The setting apart of funds for depreciation and amortization, and bearing on the income-tax law in Germany].—Glückauf, Apr.13,1912; p. 596-602; 50c.

Cabell, R. E.—*Basis for Calculating Special Excise Tax on Corporations;* [U. S. tax on oil corporations].—Oil Age, March1, 1912; p. 2; p. 5; 2200 w; 20c.

Ecke, G.—*Der Entwurf des neuen preussischen Einkommensteuergesetzes und der Bergbau;* [The suggested new income-tax law of Prussia, and its bearing on the mining industry].—Kali, May1,1912; p. 202; 2200 w; 35c.

Edwards, Geo. E.—*Michigan's New Law Taxing Reserved Mineral Rights.*—Mining & Engg. World, Dec.23,1911, p. 1268; 500 w; 10c.

Leeming, F. B.—*Guide to the Income Tax;* [British].—London, 1912; pp. —; (book).

McDonald, P. B.—*Taxation of Mineral Rights in Michigan;* [Taxing undeveloped ore].—E. & M. J., Jan.13,1912, p. 108; 1300 w; 25c.

———. *Die Besteuerung der Gesellschaften m.b.H. nach der preussischen Regierungsvorlage;* [Direct taxation of corporations in Prussia in relation to the newly proposed income-tax amendments].—Deu. Bergwerks Ztg., May2,1912; p. 1; 2500 w; 35c.

———. *Die Einkommensteuerveranlagung der Gewerkschaften;* [Regulations on assessing the income tax on mines in Germany].—Deu. Bergwerks Ztg., Apr.17,1912; p. 1; 3000 w; 35c.

———. *Equitable Taxation;* [Discusses Scranton scheme to tax collieries for damages to property due to cavings].—Coal Age, Feb.3,1912; p. 551; 1200 w; 20c.

———. *Taxing Reserved Mineral Rights in Michigan.*—Mining & Engg. World, Apr. 27,1912; p. 896; 500 w; 10c.

———. *Taxing Productive and Unproductive Mines;* [in Colorado].—Mng. Sci., March14,1912; p. 243; 750 w; 20c.

———. *Taxation of Oil Properties.*—of April 1, 1912, on placer claims and joint Oil Age, June7 1912; p. 1; 1100 w; 20c.

———. *Zur Abänderung des Einkommensteuergesetzes;* [Notes on the amended income-tax law of Germany as affecting mining corporations; petition of the Silesian Mng. & Met'g'l Soc.].—Oberschles. Berg- & Hüttenm. Ver., Zts., April,1912; p. 158; 10,000 w; 45c.

GOVERNMENT OWNERSHIP; NATIONALIZATION

Broome, G. H.—*History of Victorian State Coal Mines.*—In F. D. Power's "Coalfields and Collieries of Australia," pp. 374-383*.

Clark, C. M.—*The State Coal Mine, Wonthaggi, Victoria, Australia;* [From the "I. C. S. Student"].—Coll'y Guardn., Apr. 26,1912; p. 833; 1500 w; 35c.

Clement, M.—*Mines fiscales et mines privées;* [Budget Commission report on state vs. private mining in Germany; from Bergwirtsch. Mittingn., 1911, pp. 142-164].—Rev. Noire, Feb.18,1912, p. 75; March3, p. 97; March17, p. 121; March31, p. 145; 8000 w; 65c.

Hasslacher, A.—*Das Industriegebiet an der Saar;* [Industrial review of the Saar River region, including Prussian state collieries].—Saarbrücken, 1911; 171 pp.; (book).

Jüngst, E.—*Der Bergarbeiterausstand im Rihrrevier und die Verstaatlichung des Kohlenbergbaues;* [The Ruhr coal strike and the problem of nationalization of coal mines].—Deu. Bergwerks Ztg., March22, 1912; p. 1; 1000 w; 35c.

Leis, Jos.—*Aus welchen Gründen empfiehlt sich die Einführung eines Petroleum-Reichsmonopol?* [What are the reasons for a government petroleum monopoly in Germany?].—Petroleum, March20,1912; p. 645; 6000 w; 45c.

Rowe, H. E.—*The State Coal Mine;* [Discusses alleged failure of Victoria state coal mine to meet expectations].—Vict. Chamber of Mines, Jnl., Feb.,1912; p. 120; 4500 w; 65c.

Rowe, H. E.—*The State Coal Mine and State Socialism;* [Discusses alleged failure in Victoria].—Vict. Chamber of Mines, Monthly Rep., Jan.31,1912; 2800 w; 75c.

Weissner, Dr.—*Der Staatsbergbau und die Prämienlohnsysteme;* [State mining in Prussia and the system of wage premiums].—Glückauf, March16,1912; p. 438-440; 50c. Also in Berg- & Hüttenm. Rundschau, March20, p. 127; 3000 w; 35c.

———. [*Abstract of official report on Prussian state mines, their production and profits; fiscal year* 1910; in German].—Oberschles. Berg- & Hüttenm. Ver., Zts.; March,1912; p. 111-125; 35c.

———. *Das serbische Petroleummonopol;* [The petroleum monopoly in Servia; records, 1902-1910].—Petroleum, May1, records, 1902-1910.—Petroleum, March16, p. 591; May1, p. 825; 2000 w; table; 65c.

———. *Der staatliche Bergbau in Preussen;* [Results of state mining in Prussia].—Berg- u. Hüttenm. Rundschau, Dec.5, p. 48; Dec.20, p. 60; Jan.5,1912; p. 73; Jan.20, p. 84; 6000 w; 80c.

———. *Die Ergebnisse des Betriebs der unter der preussischen Berg-, Hütten- und Salinen-Verwaltung stehenden Staatswerks im Rechnungsjahre* 1910; [Profits in the fiscal mines, mills and smelting works of Prussia, 1910].—Montan. Ztg., March15, 1912; p. 104; 3000 w; 35c.

———. *Government-Owned Coal Mines in Alaska;* [Opposes proposition].—Mining & Engg. World, Jan.20,1912; p. 103; 2000 w; 10c.

———. *National Control of Mines;* [Editorial in opposition].—Coal Age, Apr.20, 1912; p. 915; 1400 w; 20c.

———. *Nationalization of Mines;* [Economics of coal mining and profits, especially in German state mines].—Coll'y Guardn., Feb.9,1912, p. 287; 3000 w; 30c. Also discussed in London Mng. Jnl., March 2,1912; p. 205; 2000 w; 35c. Also in Australian Mng. & Engg. Rev., May,1912; p. 327; 2000 w; 35c.

———. *New South Wales State Coal Mine;* [Abstract of speech before Legislative Assembly favoring proposed measure].—Australian Mng. Standd., March7,1912; p. 209; 800 w; 35c.

———. *The Russian Government Plati-*

num Monopoly.—Mining & Engg. World, Apr.13,1912; p. 829; 1500 w; 10c.

———. *The Swedish State Power Station.*—Engnrg., May3,1912; p. 587; 2100 w*; 35c.

———. *Zur Frage des Reichspetroleummonopols;* [The question of imperial petroleum monopoly in Germany].—Petroleum, Feb.21,1912; p. 525; March6, p. 589; March 20, p. 651; Apr.3, p. 714; 15,000 w; $1.25.

CONSERVATION; PRO AND CONTRA

See also "Waste Disposition," Chapter 13.

American Chemical Society.—*Conservation and Mineral Wastes Symposium;* [Carbon Wastes, by J. A. Holmes; Zinc Losses, by W. H. Bassett; Special Alloys for Special Purposes, by W. H. Bassett; Potash and Phosphoric Acid, by F. K. Cameron; Nitrogen, J. D. Pennock; Silicate Industries, by A. V. Bleininger; Metallurgic Gases and Fumes, by F. G. Cottrell; Miscellaneous Metal and Mineral Wastes, by C. L. Parsons].—Jnl. of Ind'l & Engg. Chem'y, March,1912; pp. 160-188; 65c.

Baldwin, Geo. E.—*The Alaskan Question;* [What the government does for and to Alaska].—Amer. Mng. Congr., 1911; Proc., Vol. 14, pp. 299-308.
Abstract in Black Diamond, Oct.28,1911, p. 53; 3000 w; 30c.

Boileau, J. W.—*Early Exhaustion of Connellsville Coking Coals Forecasted;* [From Connellsville, Pa., "Courier"].—Coal & Coke Op., June6,1912; p. 363; 800w; 25c.

Buckley, E. R.—*Shall Our Public Lands Be Leased or Sold?*—Mining & Engg. World, Jan.6,1912; p. 4; 9200 w; 10c.
Editorial discussion, page 1; 2100 w; 10c.

Brinsmade, R. B.—*Professor's Idea of the Land Question;* [Favors leasing system; opposes Buckley].—Mining & Engg. World, Feb.10,1912; p. 363; 600 w; 10c.

Douglas, Jas.—*Some Reflections on the Disposal of Public Coal Lands;* [Coal mining at Dawson, N. Mex., as a guide to conservation policy].—Amer. Mng. Congr., 1911; Proc., Vol. XIV, pp. 214-226.
Illustrated abstract in Black Diamond, Dec.16,1911, p. 15; 3200 w*; 30c.

Douglas, Jas.—*The Industrial Progress of the United States of America;* [Reviews influence of mineral-land and other land laws].—Roy. Soc. of Arts, Jnl., Nov.24, p. 21; 16,000 w; 35c.
Abstract in Mining & Engg. World, Dec. 16, p. 1213; Dec.23, p. 1261; 7500 w; 20c. Also in M. & S. P., Dec.23, p. 800; 3500 w; 20c.

Frech, Fr.—*Deutschlands Steinkohlenfelder und Steinkohlenvorräte;* [Coal fields and estimated visible coal supplies of Germany].—Stuttgart; 1912; 165 pp.; 25 figs.; $5 (book).
Discussion and comment by Speiser in Stein- & Braunkohle, May15,1912; p. 119; 1000 w; 35c.
Abstract in English in Engrng., Apr5, p. 462; 3000 w; 30c.

Fishback, Martin.—*Conservation vs. Encouragement.*—Amer. Mng. Congr., Proc., Vol. 14, 1911, pp. 334-336. Abstract in M. & S. P., June1,1912; p. 766; 1000 w; 20c.

Fisher, Hon. Walter L.—*Address on Alaska Problems before American Mining Congress,* Oct.27,1911.—Washington, 1911; 26 pp.; (pamphlet).
Reprint in Coal Trade Bull., Nov.1, p. 31; 9500 w; 25c. Abstract and discussion in E. & M. J., Nov.11, p. 925, 934; 5600 w; 25c. Also in Black Diamond, Nov.4, p. 18; 4000 w; 30c. Also in M. & S. P., Nov.25, p. 674; p. 672; 3500 w; 20c.
Amer. Mng. Congr., Proc., Vol. 14, 1911, pp. 363-389.

French, H.—*How the Deposed Ex-Forester Would Mine Alaskan Coal;* [Criticizes Pinchot's suggestions for Alaska coal-land disposition].—Mining & Engg. World, Jan. 20,1912; p. 125; 1200 w; 10c.

Harriman, H. R.—*Wanted, An Informed Public Sentiment to Support a New Federal Policy Toward Alaska.*—Amer. Mng. Congr., Proc., Vol. 14, 1911, pp. 309-319.

Hoover, H. C.—*Australian Mining Laws;* [Opposes leasing system in favor of fee simple for mineral lands].—M. & S. P., May 25,1912; p. 731; 1100 w; 20c.

Knight, J.—*A Personal Experience with the Conservation Idea;* [Reviews proposed conservation and leasing of the Utah gilsonite deposits in the 90's].—Amer. Mng. Congress, 1911; Proc.; Vol. 14, pp. 159-162.
Abstract in Black Diamond, Oct.28, p. 52; 1800 w; 30c. Also in Mining & Engg. World, Nov.4, p. 902; 300 w; 10c.

Kreuzkkam, Dr.—*Die "schwarze Sorge";* [The "black peril"; estimated supplies and future consumption of coal in Gt. Britain].—Kali Erz & Kohle, March5,1912, p. 233; March15, p. 269; 3000 w; 50c.

Laur, F.—*La fin normale d'une mine d'or;* [The exhaustion of gold mines].—Echo d. Mines, Feb.29,1912; p. 259; 1000 w; 35c.

Leehey, M. D.—*Coal and Transportation in Alaska;* [also discusses and opposes leasing system].—Amer. Mng. Congr., Proc., Vol. 14, 1911, pp. 337-350.

Meachem, I.—*The Loss of Mineral Areas in South Staffordshire;* [Coal losses in pillars, supports, flooded workings, etc.; read to S. Staff. & Warwicks. Inst. of Mng. Engrs.].—Coll'y Guardn., Feb.23,1912; p. 377; July26, p. 176; 5000 w; 50c. Also in Iron & Coal Trades Rev., Feb.23, p. 289; July26, p. 126; 5000 w; 50c.

Ralston, J. C.—*Water-Power Legislation in Western Mining States;* [read to Northwest Mng. Convention, Spokane, Feb.].—Mining & Engg. World, March9,1912; p. 551; 2100 w; 10c. Also in Mng. Sci., March 14, p. 251; 2500 w; 20c.

Reynolds, S.—*Longwall and Conservation;* [Advantages over room-and-pillar mining].—Coal Age, Jan.20,1912; p. 475; 1600 w; 20c.

Searcy, W. N.—*Federal Investigations of Ore Treatment Problems.*—Amer. Mng. Congr., 1911; Proc., Vol. 14; pp. 196-207.
Reprint in Mining & Engg. World., Nov. 18, 1911, p. 1005; 3200 w; 10c.

Smith, Geo. O.—*What the West Needs in Coal Land Legislation;* [Outline of administration's policy].—Amer. Mng. Congr., 1911; Proc., Vol. 14; pp. 285-290.
Abstract in Mng. & Engg. World, Nov.4, p. 902; 200 w; 10c. Also in Mng. Sci., Nov. 9, p. 436; 2600 w; 20c; Also in M. & S. P., Nov.11, p. 612; 2400 w; 20c. Also in Coal Trade Bull., Nov.15, p. 29; 2500 w; 25c. Also in E. & M. J., Nov.25, p. 1049; 1600 w; 25c.

Spry, Hon. Wm.—*The Question of Conservation: The Public Lands.*—Amer. Mng. Congr., 1911; Proc., Vol. 14, pp. 138-145.
Reprint in Salt Lake Mng. Rev., Nov.30, 1911, p. 18; 3500 w; 25c.

Taylor, S. A.—*Coalfields of the World with Some Data Thereon;* [abstract; read to Coal Mng. Inst. of Amer., Dec.,1911].—Coal & Coke Op., Dec.21,1911, p. 410; 5000 w; 25c.

Thompson, Jul.—*How Can Alaska Be Developed?* [Opposes leasing system].—M. & S. P., Feb.17,1912, p. 282; 1800 w; 20c.

Veatch, A. C.—*Mining Laws of Australia and New Zealand;* [With special reference to the leasing system].—U. S. Geol. Survey, Bull. 505; 1911; 180 pp.; 10c.

Walker, S. F.—*The Threatened Coal Shortage;* [Lecture before Asso. of Mng. Electr. Engrs.].—Iron & Coal Trades Rev., Dec.22,1911, p. 1013; 2000 w; 30c.

Watts, W. W.—*Presidential Address, Geological Society of London, Feb.* 16, 1912; [Conservation and duration of British coal supply].—Coll'y Guardn., Feb.23, 1912; p. 379; p. 387; 2000 w; 30c.

British Science Guild.—*Natural Sources of Energy.* (See under Power, etc.).

———. *Conservation: Saving vs. Using Our Resources.*—Mining & Engg. World, March23,1912; p. 641; 1200 w; 10c.

———. *Efficiency in Fuel Combustion;* [Discusses economic waste of coal in this field].—El. Rev., Dec.29,1911, p. 1063; 1000 w; 35c.

———. *Government Would Limit Profit on Western Coal;* [Proposed Dymond leasing system limiting profit to 50 cts. per ton].—Black Diamond, March9,1912; p. 20; 2000 w*; 30c.

———. *Leasing Agricultural and Mineral Lands.*—Mng. & Sc. Press, Jan.27,1912; p. 161; 1000 w; 20c.

———. *Norwegische Konzessionspolitik in Bezug auf den Erwerb von Erzbergwerken;* [Review of Norwegian legislative principles as applied in the granting of mining concessions].—Erzbergbau, Jan.15,1912, p. 24; 2000 w; 35c.

———. *The Disposal of Public Mineral-Bearing Lands;* [Opposes leasing system].—Mining & Engg. World, Feb.10,1912; p. 335; 1500 w; 10c.

Financial; Business Organization

See also Economics of the Coal Trade, under "Coals"; also "Profits, Wages," etc., under "Labor."

See also "Ore Reserves."

Blümel, —. *Zur Frage der Abschreibungen wegen Substanzverminderung;* [The setting apart of funds for depreciation and amortization, and bearing on the income-tax law in Germany].—Glückauf, Apr.13,1912; p. 596-602; 50c.

Bréchignac, J.—*La Mine aux Mineurs de Monthieux, Loire;* [The Miners' Co-Operative Mine at Monthieux, Loire; Its Rise and Failure; doctorate thesis].—Lyon, France, 1911; pp. —. Brief review in Soc. de l'Ind. Minrl. St. Etienne, C-R., Sept.,1911, p. 555; 400 w; 75c.

Briggs, H.—*Profit and Safety in Mining:* [Presidential address, Scottish Federated Inst. of Mng. Students, Eastern Branch].—Iron & Coal Trades Rev., Feb.9,1912; p. 203; 4000 w*; 30c.

Burnham, N. H.—*The Finance of a Mine;* [Discusses keeping of development records intelligible to non-expert investors].—Mng. Mag., May,1911, p. 361; June, p. 443; July, p. 39; Aug., p. 125; Sept., p. 209; Oct., p. 280; Dec., p. 444; June, p. 431; 16,000 w*; $2.25.

Denny, H. S.—*The Finance of a Mine;* [Mining as an investment; discusses Burnham's paper].—Mng. Mag., Apr.,1912; p. 288; 2400 w; 45c.

Emmons, N. H., 2d.—*Concise Method of Showing Ore-Reserves.*—Amer. Inst. Mng. Engrs., Trans.; Feb.,1912; 6 pp.; 1000 w*; 50c. Reprint in E. & M. J., March9,1912, p. 505; 25c.

Hague, Wm.—*The Basis of Calculating Mining Tonnage Costs;* [Tonnage vs. cu. ft. and tonnage of ore mined vs. milled].—E. & M. J., Feb.3,1912; p. 247; 1500 w; 25c.

Hammond, J. H.—*Mining as an Investment.*—Amer. Mng. Cong., 1911; Proc., Vol. 14, pp. 163-167.

Jeans, H.—*The Control of Prices in the Export Steel Trade;* [In Britain, America and Germany; read to Staffords. Iron & Steel Inst.].—Iron & Coal Trades Rev., March29.1912; p. 498; 6000 w; 35c.

Key, A. Cooper.—*Two Decades of the Rand; Production and Dividends.*—Mining & Engg. World, March16,1912; p. 599; 1500 w*; 10c.

Langton, J.—*A Method of Calculating Sinking Funds, and a Table of Values for Ordinary Periods and Rates of Interest;* [Discussion of Dilworth's paper, March, 1910].—Amer. Inst. Mng. Engrs., Bull. 60, Dec.,1911, p. 1039; 500 w; tables; $1.15.

Leake, P. D.—*Depreciation and Wasting Assets.*—London, 1911; 200 pp.; $3.50 (book).

Mining & Met'g'l Soc. of America.—*Paralysis of Mining Districts; the Causes and Remedies Therefor.*—M. & M. Soc. of Amer., Bull. 46, March30,1912; p. 39-48; 50c.

O'Donahue, T. A.—*The Valuation of Mineral Properties;* [Read to S. Staff. & Warwicks. Inst. of Mng. Engrs.; abstract].—Coll'y Guardn., Feb.23,1912; p. 380; March1, p. 423; 5400 w; 50c. Also in Iron & Coal Trades Rev., Feb.23, p. 291; March 1, p. 328; July26, p. 118; 10,000 w; 65c.

Prill, A.—*Systematizing Annual Reports to Stockholders.*—Mining & Engg. World, Feb.24,1912; p. 465; 2000 w*; 10c.

Quandt, Carl.—*Unwandlung von Aktiengesellschaften in Gesellschaften m. b. H;* [Transformation of ordinary stock companies into companies with strictly limited liability].—Vienna; 1911; 44 pp; $1 (pamphlet).

Richardson, T. and J. G. Walbank.—*Profits and Wages in the British Coal Trade, 1898 to 1910.*—Newcastle on Tyne; 1911; pp. —; 75c; (pamphlet).

Review in Coll'y Guardn., Jan.12,1912; p. 85; 2000 w; 30c.

Rickard, T. A.—*The London Market for Mining Shares and Metals;* [Review for 1911].—M. & S. P., Jan.6,1912, p. 15; 4500 w; 35c.

Scholz, Carl.—*The Economics of the Coal Industry;* [Reviews rise and development of the Rhein-Westphalian syndicate].—Amer. Mng. Congr., 1911; Proc., Vol. 14, pp. 241-245.

Abstract in Black Diamond, Oct.28,1911, p. 32; 1500 w; 30c. Also in Mining & Engg. World, Nov.4, p. 899; 500 w; 10c.

Seidl, —. *Kohlenpreise und Förderkosten:* [Coal prices and cost of production].—Technik & Wirtschaft, Jan.,1912, pp. 47-58; 75c.

Shaw, S. F.—*Data of the World's Principal Mines;* [Annual tonnage, profits, dividends, costs per ton, and ore reserves].—E. & M. J., Jan.13,1912, p. 133; 3 pp.; tables; 25c.

Truscott, S. J.—*The Finance of a Mine;* [Discusses earlier paper by Burnham].—Mng. Mag., Jan.,1912; p. 57; 1600 w; 45c.

Webber, M., R. B. Hoffman and C. S. Herzig.—*The Finance of a Mine;* [Discusses

"future possibilities" in ore reserves, and their valuing; discussion of Burnham's paper].—Mng. Mag., March,1912; p. 213; 3500 w; 45c.

Webber, M.—*Conservation of Investments in Gold Mines.*—M. & S. P., Feb.3,1912, p. 214; 800 w; 20c.

Zern, E. N.—*Prices of Coal and Materials Used in Mining Compared.*—Coal & Coke Op., Dec.21,1911, p. 404; 2500 w; 25c.

Mining World Co.—*Dividends of American Mines and Works, April,* 1912.—Mining & Engg. World, May4,1912; p. 946; 750 w; 10c.

Mining World Co.—*Five Months' Dividends of Mines and Works;* [Dividend tables of American mines, etc., for May,1912].—Mining & Engg. World, June8,1912; pp. 1183; 1230-1231; 10c.

Mining World Co.—*Two Months' Dividends of Mines and Works;* [Dividend tables of American mines and works, Jan. and Feb.,1912].—Mining & Engg. World, March 9,1912; p. 545; 1000 w; table; 10c.

———. *American Federation of Coal Operators is Formed.*—Black Diamond, Dec. 23,1911, p. 15; 3200 w; 30c.

———. *Copper and Other Syndicates;* [Discusses proposed combination in U. S.].—Mining & Engg. World, Dec.23,1911, p. 1253; 1000 w; 10c.

———. *Dividends of Transvaal Mining Companies in* 1911.—Mining & Engg. World, March23,1912; p. 661; 2200 w; 10c.

———. *Dividends for* 1911; *Complete Returns, Gold, Diamonds, Coal, Tin, etc.* [Rand].—S. Afr. Mng. Jnl., Jan.6,1912; p. 641; 1000 w; tables; 35c.

———. *Dividends Paid by American Mines and Works,* 1911.—Mining & Engg. World, Jan.27,1912; p. 190; 3000 w; tables; 10c.

———. *High-Yielding Mines;* [Review of British controlled mining shares of high yield].—Mng. World (London), Feb.10, 1912; p. 156; 1000 w; tables; 35c.

———. *Mining Company Dividends in* 1911.—E. & M. J., Jan.6,1912, p. 35; 2100 w; 25c.

———. *New York Share Market in* 1911.—M. & S. P., Jan.6,1911, p. 92; 1500 w; 35c.

———. *Phantom Profits;* [Net vs. actual vs. operating vs. distributed profits in gold mining by leading companies].—Mng. Mag., Apr.,1912; p. 255; 2000 w; 45c.

———. *Rand Mining as an Investment.*—S. Afr. Mng. Jnl., Feb.17,1912; p. 859; 1500 w; 35c.

———. *Risk in Mining Investment Depends Largely on Investor.*—Mining & Engg. World, March16,1912; p. 591; 1000 w; 10c.

———. *The "Blue Sky" Law;* [Kansas law to minimize wild-cat promotion].—M. & S. P., March16,1912; p. 397; 1100 w; 20c.

———. *The Mining Market in* 1911.—Mng. Jnl., Jan.6,1912, p. 1; 7000 w; 35c.

———. *Transvaal Gold Mines' Dividends for* 1911.—S. Afr. Mng. Jnl., Dec.23,1912; p. 559; 1000 w; tables; 35c.

———. *Unsound Company Promotions;* [Discusses Colonial Oil Co., and Hills Bar Gold Dredging Co., caisson dredging on Fraser river, B. C.].—Brit. Columbia Mng. & Engg. Record, Feb.,1912; p. 198; 2200 w; 35c.

SYNDICALISM

Addicks, Benj.—*Effect of Uncontrolled Competition and Need of Price Associations.*—Coal Age, May18,1912; p. 1049; 1000 w; 20c.

Giebel, H. A.—*Die Finanzierung der Kali-Industrie;* [Financiering and promotion in the German potash industry].—Karlsruhe, 1912; pp. —; $1.50 (book).

Goldschmidt, C.—*Ueber die Konzentration im deutschen Kohlenbergbau;* [Centralization of control in the German coal mining industry].—Karlsruhe, 1912; 130 pp; $1 (book).

Görres, K., and K. Kormann.—*Das Reichskaligesetz;* [The German Potash Law].—Charlottenburg, 1911; pp. — (book).

Hillringhaus, A.—*Der allgemeine deutsche Roheisenverband und seine Vorgeschichte;* [The Central Pig-Iron Union of Germany and its historical development].—Giesserei Ztg., Dec.1,1911, p. 727; 2500 w; 35c. Also in Centralbl. d. Hütten & Walzwerke, Jan. 15,1912; p. 25; 1500 w; 35c.

Jüngst, E.—*Die Bergwerksproduction des niederrheinisch-westfälischen Bergbaubezirks im Jahre* 1911; [Review of syndicate and non-syndicate mine production in the Lower Rhine-Westphalia region, 1911; chiefly coal, coke, and by-products].—Glückauf, May18,1912; p. 795-806; tables; 5000 w; 50c. Table of coal production by non-syndicate mines, 1911, in Deu. Bergwerks Ztg., May18, p. 1; tables; 35c.

Kreutz, Wm.—*Wertschätzung von Bergwerken;* [The valuation of mines; Supplement: System of valuation and allotments of participants in the Rhine-Westphalia Coal Syndicate].—Cologne; 1912; 31 pp; $1 (pamphlet).

Kuhn, D. W.—*Sherman Anti-Trust Law with Special Reference to the Coal Mining Industry.*—Amer. Mng. Congr., 1911; Proc., Vol. 14, pp. 257-269.

Pinkl, V. and G. Maynard.—*Vorzüge und Nachteile der Verkaufsvereinigungen;* [Advantages and drawbacks to centralized syndicated selling agencies, especially in the new German Brick Syndicate].—Ton-Industrie Ztg., Jan.25,1912, p. 135; 4000 w; 25c.

Pitaval, R.—*L'entente des fabricants d'aluminium;* [The international aluminum syndicate agreement].—Echo d. Mines, May 30,1912; p. 635; 1000 w; 35c.

Traer, G. W.—*Plea for Revision of the Sherman Act;* [Address to Committee on Interstate Trade, Washington, D. C., Feb.1, 1912, on behalf Illinois Coal Operators' Asso.].—M. & S. P., Feb.17,1912, p. 268; 2400 w; 20c.

Traer, G. W.—*Anti-Trust Laws in Their Relation to the Coal Industry.*—Amer. Mng. Congr., Proc., Vol. 14, 1911, pp. 270-279. Abstract in Coal Trade Bull., Apr.1, p. 47; 5000 w; 25c. Also in Mines & Minerals, June, p. 644; 3000 w; 35c.

Williams, W.—*Anti-Trust Laws in Their Relation to the Mining Industry.*—Amer. Mng. Congr.,1911, Proc., Vol. 14, pp. 280-284.

———. *Das Kartell und die Politik;* [Political significance of the renewal of the German Steel Syndicate].—Centralbl. d. Hütten & Walzwerke, May15,1912; p. 253; 2400 w; 35c.

———. *Die Grundlinien der Ziegelsyndikate;* [Principles of organization of the German brick syndicate].—Ton-Industrie Ztg., Jan.11,1912; p. 53; 3000 w; 30c.

———. *Die neue Verkaufsvereinigung deutscher Dachziegelfabrikanten;* [The new centralized sales-agency of the German Brick Syndicate].—Ton-Industrie Ztg., Jan. 23,1912, p. 124; 2000 w; 25c.

———. *Die Oesterreichische Kartellenquete über die Kohlenindustrie;* [Investigation by the Austrian Ministry of Commerce on the syndicate organization of the coal industry in Austria].—Deu. Bergwerks Ztg., May24,1912; p. 1; May25, p. 1; 2500 w; 50c. Also in Oestr.-Ungar. Montan- & Also in Zentr. Verbd. Bergbau Betriebsl. Oestr., Zts., Junel, p. 327; 5000 w; 45c.

———. *Die Preispolitik des Kohlensyndikats;* [The price policy of the Rhine-Westphalian Coal Syndicate].—Konjunktur, 1912; p. 16; 80c.

———. *Die Verkaufsvereinigung Deutscher Dachziegelfabrikanten G. m. b. H.;* [The centralized sales agency system of the German Roofing-Tile Manufacturers' Asso., Ltd.].—Ton-Industrie Ztg., March28,1912; p. 546; 3000 w; 30c.

———. *Ein Kartell in der Metallurgie Italiens;* [The formation of the Italian steel trust].—Erzbergbau, Dec.15,1911, p. 329; 1000 w; 35c.

———. *Enquête über die Kartellorganisationen in der oesterreichischen Mineralölindustrie;* [Government inquiry on syndicate or trust organizations in the Austrian petroleum industry].—Petroleum, April3, 1912; p. 716; 10,000 w; 50c.

———. *Per una proroga della durata del Consorzio obbligatorio per l'industria solfifera siciliano;* [The proposed renewal of the Consorzio of the Sicilian sulphur industry].—Rassegna Mineraria, Apr.11,1912; p. 209; 1000 w; 40c.

———. *The German Steel Syndicate; Details of the Statutes.*—Iron & Coal Trades Rev., Apr.19,1912; p. 599; 5000 w; tables; 35c.

———. *The German Steel Works Agreement;* [Discusses 5-year renewal agreement]—Iron Age, May9,1912; p. 1168; 750 w; 30c.

———. *The Rhenish-Westphalian Coal Syndicate in* 1911; [Reviews production].—Iron & Coal Trades Rev., May3,1912; p. 688; 1500 w; 35c.

———. *The Tin Plate Industry of Germany;* [Semi-centennial of Weissblech Verkaufs Comptoir].—Iron & Coal Trades Rev., Apr.26,1912; p. 649; 1800 w*; 35c.

———. *Ueber die Organisation des Raffinerie-Verbandes;* [Organization of the oil-refiners' syndicate of Hungary; from "Gazeta Wieczorna"].—Allgm. Oestr. Chemiker Ztg., May1,1912; p. 65; 1300 w; 45c.

———. *Zur Erneuerung des Stahlwerksverbandes;* [The renewal of the German Steel Syndicate].—SW. Deu. Industrie Ztg., May14,1912; p. 260; 2400 w; 35c.

Educational

Alderson, V. C.—*The Experimental Ore-Dressing and Metallurgical Plant of the Colorado School of Mines.*—Met. & Cheml. Engg., May,1912; p. 269; 3500 w*; 35c. Also in Colo. School of Mines Quar'ly, July, 1912; 10 pp.*; 50c.

Carmichael, H. G.—*A New Departure in Mining Education;* [Mining department in high schools, Sudbury, Ont.].—Canadian Mng. Inst., Bull. 18, Feb.,1912; p. 17; 1200 w; $1.20.

Chauvenet, R.—*Fundamentals in Technical Education.*—Mines & Minerals, Apr., 1912; p. 550; May, p. 629; June, p. 688; 15,000 w; 95c.

Copeland, D.; H. T. Mann, and H. A. Roesler.—*Metallurgical and Ore-Dressing Laboratories of the Missouri School of Mines & Metallurgy.*—Mo. School of Mines, Bull; Feb.,1912; pp. 3-49*; 50c.

Friedrich, K.—*Das Metallhüttenmännische Institut der Kgl. Technischen Hochschule zu Breslau;* [The metallurgical department and equipment in the Royal Technical College, Breslau].—Metallurgie, Jan.22,1912; p. 41; Feb.8, p. 81; 12,000 w*; 75c.

Hansen, G. T.—*Ore-Testing Laboratory, Missouri School of Mines.*—Mining & Engg. World, Dec.16,1911, p. 1215; 1000 w*; 10c.

Holden, E. C.—*Mining and Metallurgical Laboratories at Wisconsin.* — Wisconsin Engr., Feb.,1912; p. 227; 2600 w*; 35c.

Holmes, J. A.—*Education to the Miner as a Worker and Citizen;* [Read to 44th annual convention of Y. M. C. A. of Pennsylvania, Feb. 23, 1912].—Coal & Coke Op., Apr.11,1912; p. 229; 1500 w; 25c.

Holmes, Jos. A.—*Progress and Plans of the Bureau of Mines;* [Read to Miners' Convention, Indianapolis, Jan.13,1912].—Coal Trade Bull., March1,1912; p. 47; 4500 w; 25c.

Judd, Edm. K.—*Ore-Dressing Equipment of the Columbia School of Mines.*—Mng. Sci., Apr.11,1912; p. 326; 2700 w*; 20c.

Lawrence, B. B.—*The Technical Graduate in Latin America.*—Mex. Mng. Jnl., Feb., 1912; p. 34; 800 w; 25c.

Matschoss, —. *Die Entwickelung des technischen Unterrichtswesens in Deutschland;* [Development of technical education in Germany; address to the Eisenhütte Oberschlesiens].—Stahl & Eisen, Feb.8, 1912, pp. 217-224; 50c.

McCullough, E.—*Benefits of Home Study Course for Mining Men.*—Mining & Engg. World, Sept.16,1911, p. 525; 3200 w; 10c. Reprint in W. Australian Mng., etc., Jnl., Nov.4. p. 12; 35c.

Penkert, R.—*Vorzüge von Fortbildungsschulen auf Bergwerken unter spezieller bergmännischer Leitung;* [Advantages of training schools at mines and instruction by practical miners].—Kohle & Erz, March18, 1912; p. 275; 1500 w; 35c.

Porter, J. B.—*Experimental Coal-Washing Plant at McGill University.*—Coll'y Guardn., May17,1912; p. 983; 2500 w*; 35c.

Rowell, H. S.—*The Berlin Technische Hochschule at Charlottenburg, Germany.*—Engnrg., March8,1912; p. 305; March15; p. 342; 8000 w*; 50c.

Saunders, W. L.—*Culture in the Education of Engineers;* [Address at 38th annual commencement, Colo. School of Mines].—M. & S. P., May25,1912; p. 716; 2000 w; 20c. Also in Colo. School of Mines Mag., June,1912; p. 197; 2500 w; 65c.

Scholz, F. Wm.—*The Teaching of Technical German in Engineering Schools.*—Met. & Cheml. Engg., April,1912; p. 213; 2600 w; 35c.

Smallwood, J. C.—*The Efficiency Principles of Technical Education.*—Engg. Mag., March1912; p. 915-920; 4000 w; 35c.

Thomas, C. C.—*Student Life at the German Technical Schools.*—Wisconsin Engr., Apr.,1912; p. 293-300*; 30c.

Wilski, P.—*Bergmännische Fragen; III: Die Ausbildung der Markscheider im Königreich Sachsen;* [Mining questions; III: The education of the mine surveyor in Saxony].—Techn. Blätter, May4,1912; p. 140; May11, p. 147; 4000 w; 50c.

———. *Continuation School for Shop Apprentices;* [Cincinnati plan for machine-shop employes].—Iron Trade Rev., May16, 1912; p. 1049; 1200 w*; 20c.

———. *Die königliche Bergakademie zu*

Freiberg; [The Royal School of Mines at Freiberg, Saxony; history].—Stein- & Braunkohle, Feb.1,1912; p. 31; 2000 w; 35c.

———. *Die montanistischen Hochschulen Oesterreichs;* [The mining colleges of Austria].—Berg- & Hüttenm. Jahrb. Leoben-Przibram, Vol. 59, 1911, No. 4, pp. 370-374; $3.

———. *Metallurgy at the University of Toronto.*—Canadian Mng. Jnl., Feb.1,1912; p. 76; 1000 w; 25c.

———. *New College Course in Technical Journalism.*—Mining & Engg. World, Apr.27,1912; p. 895; 1000 w; 10c.

———. *Research Work in Technical Schools.*—E. & M. J., Jan.27,1912; p. 203; 1200 w; 25c.

———. *The New Bessemer Laboratory;* [Ore Dressing and Metallurgy; Imperial College of Science and Technology, London].—Coll'y Guardn., Feb.9,1912; p. 273; 2500 w*; 30c.

Historical

Bell, Sir Hugh.—*Notes on a Bloom of Roman Iron Found at Corstopitum (Corbridge), Northumberland.*—Iron & Steel Inst., Jnl; May,1912; pp. 13*; 50c. Abstract in Engnrg., May10, p. 640; 3500 w*; 35c. Also in Iron & Coal Trades Rev., May10, p. 733; 3500 w*; 45c.

Burton, Wm.—*Ancient Egyptian Ceramics.*—Roy. Soc. of Arts, Jnl; May3,1912; p. 594-602; 35c.

Georgiades, A. G.—*Les mines de la Grèce;* [The mines of Greece; from Génie Civil].—Soc. Amicale d. . . Mineurs de Douai, Bull., March10,1912; p. 144; 1200 w; 35c.

Gowland, W.—*Copper and Its Alloys in Early Times;* [Presidential address, Instn. of Metals; abstract].—Engg., Jan.19,1912; p. 87; 1000 w; 30c.

Graves, H. G.—*Further Notes on the Early Use of Iron in India.*—Iron & Steel Inst., Jnl; May,1912; pp. —; 50c. Reprint in Engnrg., May10,1912; p. 644; 2100 w*; 35c. Also in Iron & Coal Trades Rev., May 10, p. 731; 2100 w*; 45c.

Hadfield, Sir Rob.—*Sinhalese Iron and Steel of Ancient Origin.*—Iron & Steel Inst., Jnl; May,1912; 40 pp*; 50c. Abstract in Iron & Coal Trades Rev., May10, p. 725; 12,000 w*; 45c. Also in Engnrg., May31, p. 745; 12,000 w*; 35c.

Italian abstract in Rassegna Mineraria, July1. p. 8; 1500 w; 35c.

Hommel, W.—*Origin of Zinc Smelting;* [In China and India].—E. & M. J., June15, 1912; p. 1185; 4000 w*; 25c.

In German in Zts. f. angew. Chemie, Jan. 19, p. 97-100*; 75c.

Martell, Paul.—*Zur Geschichte der Eisengiesserei im 16 Jahrhundert;* [History of iron founding in Germany in the 16th century].—Giesserei Ztg., Apr.15,1912; p. 249; May1, p. 285; May15, p. 319; 5500 w; 75c.

Radet, G.—*Les arts mineurs dans la Grèce archäique;* [Developments of mining in archaic Greece].—Jnl. des Savants, Feb. 1912; p. 62-78; March, p. —; $2.

Schmeisser, —. *Schlesiens Bergbau;* [Historical development of mining in Silesia; coal, lignite, iron, gold, silver, zinc, etc.].—Deu. Bergwerks Ztg., Suppl. No. 1, Oct.7,1911, p. 1; No. 2, Oct.21, p. 1; 7000 w; 50c.

Turner, T.—*Notes on Some Remains of Early [Roman] Iron Manufacture in Staffordshire.*—Iron & Steel Inst., Jnl; May, 1912; 10 pp*; 50c. Abstract in Engnrg., May10, p. 643; 2000 w*; 35c. Also in Iron & Coal Trades Rev., May10, p. 735; 2100 w*; 45c.

Villasante, F. B.—*Cartagena Histórica;* [History of Cartagena, Spain].—Cartagena, 1912; 45 pp; $1.50 (pamphlet).

Wolff, Theo.—*Eisen und Eisengewinnung im Altertum;* [Iron and the iron industry among the Egyptians and in antiquity].—Bergbau, March14,1912; p. 153; March21, p. 168; 4000 w; 50c.

———. *Deutsche Bergarbeiterstreiks in frühern Jahrhunderten;* [German miners' strikes in the 16th-18th centuries].—Stein- & Braunkohle, May1,1912; p. 107; 1000 w; 35c.

———. *Early History of the Coal Trade;* [in Britain; 13th to 16th centuries].—Iron & Coal Trades, March8,1912; p. 382; 2700 w; 30c.

Filing and Indexing Systems

Browne, R. S.—*The Keeping or Filing of Engineering Notes.*—Mining & Engg. World, Dec.9,1911; p. 1158; 6500 w; 10c. Reprint in W. Australian Mng., etc., Jnl., Jan.27, 1912; p. 9; p. 12; 45c.

Krause, L. B.—*Library Science as an Adjunct to Engineering;* [Indexing system for office engineers of Byllesby & Co., Chicago]. —Engg. Record, March2,1912; p. 233; 2700 w; 20c.

Shaw, S. F.—*Filing Engineering Notes for Ready Reference.*—Mining & Engg. World, Jan.13,1912; p. 63; 2000 w*; 10c.

A. R. K.—*The Keeping or Filing of Engineering Notes.*—Mining & Engg. World, Jan. 20,1912; p. 125; 1800 w; 10c.

———. *World's Best Bibliography of Mining and Allied Industries;* [Describes proposed semi-annual Mining World Index]. —Mining & Engg. World, Feb.3,1912; p. 279; March2, p. 497; 1600 w; 20c.

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